TC-124/124CS

USA and Canada Model

STEREO CASSETTE-CORDER

SPECIFICATIONS

Power Requirements:	AC 117V 60 Hz, 4W (DC 1.8W) DC 5V Rechargeable Battery Pack, BP-16 DC 6V Flashlight Battery, size C (1.5V×4) Car Battery Adaptor, DCC-126
Tape Speed:	1⅞ ips (4.8 cm/s)
Recording System:	4-track stereo or dual track mono convertible
Frequency Response:	50~10,000 Hz
Power Output:	1W×2
Signal-to-Noise Ratio:	45 dB
Bias Frequency:	85 kHz
Flutter & Wow:	0.28%
Recording Time:	1 hr. with C-60 cassette tape 1.5 hrs, with C-90 cassette tape
Inputs:	Microphone impedance 400Ω ..... (2) maximum sensitivity -70 dBs (0.25 mV) Auxiliary impedance 100 kΩ ..... (2) maximum sensitivity -20 dBs (0.078 V)
Outputs:	Ext. Speaker impedance 8Ω ..... (2) 0 dBs (0.775 V), -30 dBs (24.5 mV) Headphone impedance 8Ω ..... (1) -30 dBs (24.5 mV)
Transistor:	16
Diodes:	9
Head:	PP78-3602 (REC/PB Head) EF65-36 (Erase Head)
Dimensions:	6¾ (W)×2 11/16 (H)×9 13/16″ (D) (170×68×249 mm)
Weight:	4 lb 13 oz (2.2 kg) (without accessories)

SONY®

SERVICE MANUAL

TABLE OF CONTENTS

	Page
Specifications	1
Accessories	2
Block Diagram	3
General Description	3
Cabinet Top View	4
Cabinet Bottom View	4
Chassis Top View	5~6
Chassis Bottom View	5~6
Mechanical Function	7~8
Removal of Cabinet	9
Removal of Mounted Circuit Board	10
Schematic Diagram	11~12
Mounting Diagram, Conductor Side	13~14
Mounting Diagram, Component Side	17~18
Mechanical Adjustment	15~16
Electrical Adjustment	19~20
Level Diagram	21
Exploded View (1), Cabinet Top View	22
Exploded View (2), Chassis Top View	23
Exploded View (3), Chassis Bottom View	24

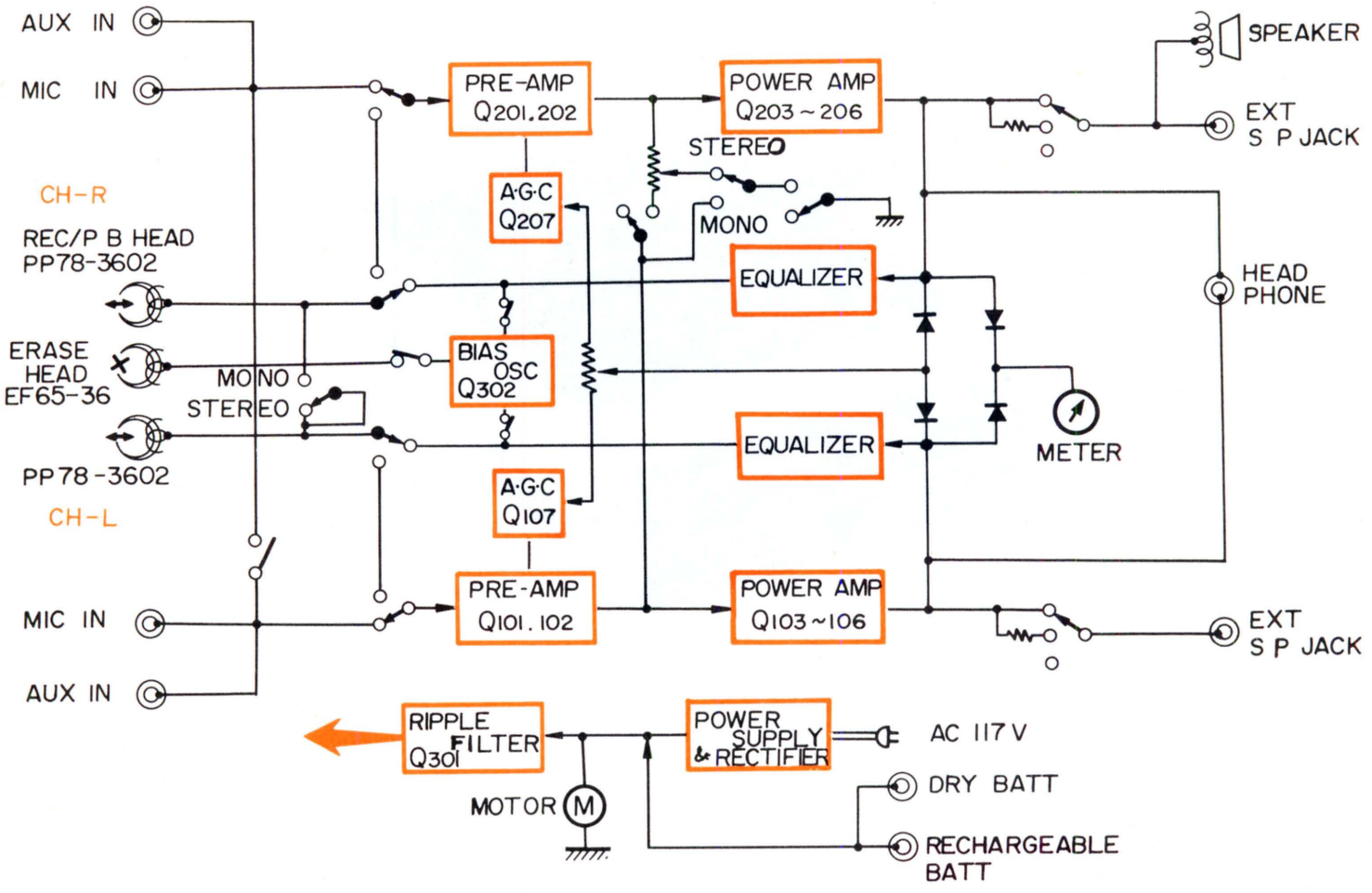
Accessories:

	TC-124	TC-124CS
One Point Stereo Microphone F-99S	1	1
Cassette Tape C-60	1	1
Magnetic Earphone ME-20	1	1
Connection Cord RK-50	2	2
Battery (Size C—SONY Super)	4	4
Carrying Case	1	1
Shoulder Band	1	1
Power Cord, 4P	1	1
Microphone Case	1	1
Instruction Manual, etc.	1 set	1 set
Speaker Box SS-12	(optional)	2
Carrying Bag	(optional)	1

Optional Accessories:

Telephone Pick-up	TP-4S
Foot Switch	FS-5
Rechargeable Battery	BP-16
Stereo Microphone Mixer	MX-6S
Car Battery Adaptor	DCC-126
Stereo Earphone	ME-13S
Stereo Headphone	DR-3A
Speaker System	SS-23
Microphone	F-25 F25-S

Block Diagram



(Fig. 1)

GENERAL DESCRIPTION

SONY Models TC-124 and TC-124CS are cassette, monaural-stereo convertible tape recorders designed to operate on AC 117 volts or DC 6 volts (by using dry, rechargeable or car batteries). These machines are greatly advanced in mechanism, and are furnished with a one-point stereo microphone designated as Model F-99S which insures easy stereophonic recording. Model TC-124CS is furnished with two accessory speakers contained in a carrying case, which enable the user to enjoy outdoor stereophonic reproduction.

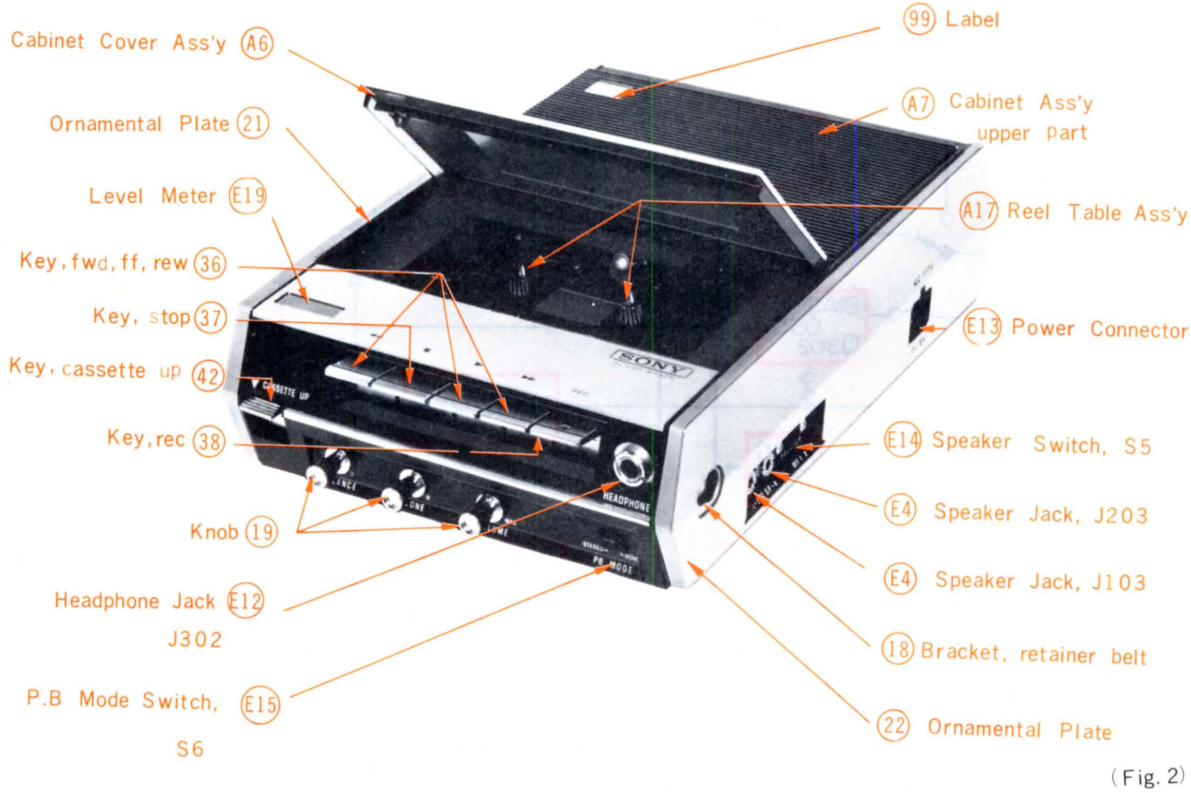
Models TC-124 and TC-124CS offer the following functional advantages:

(1) When the mode switch is placed in "MONO" position in PLAYBACK mode, a perfect mixture of L and R channels can be heard in the built-in speaker. Monaural recording and reproduction are of course possible.

(2) SONY AGC trade-named "SONY-MATIC" is employed to eliminate the bother of manually setting the record levels of L and R channels.

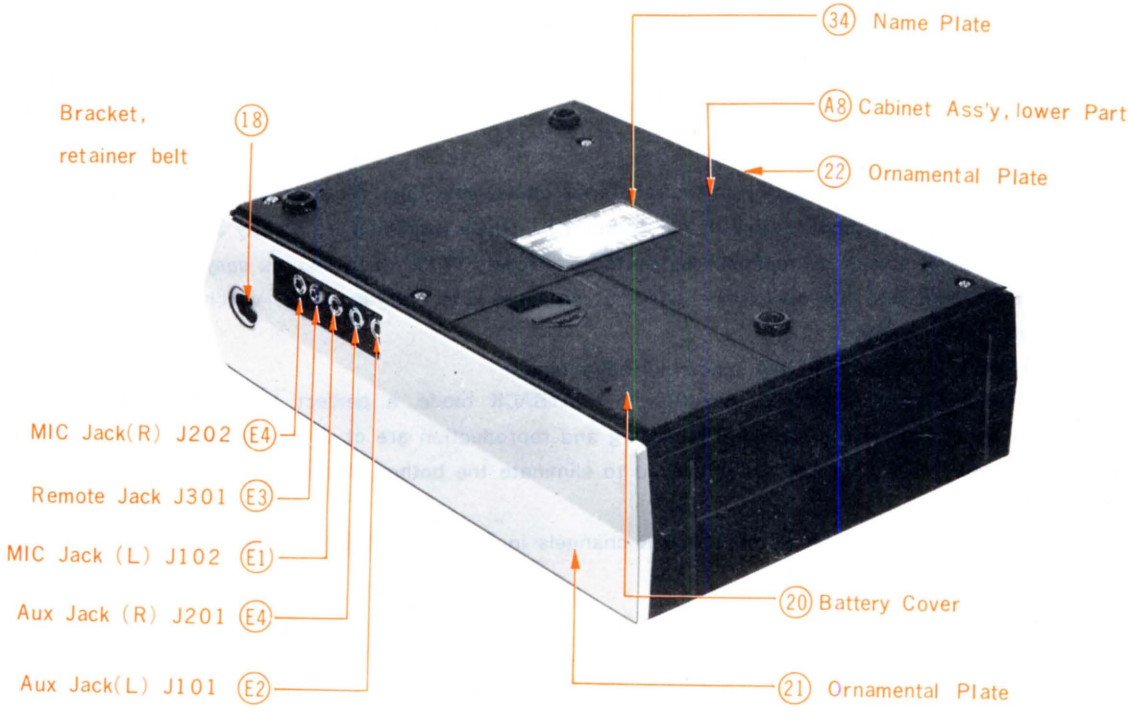
(3) The meter indicates the sum of signals of L and R channels in STEREO RECORD mode or the battery voltage in PLAYBACK mode.

Cabinet Top View



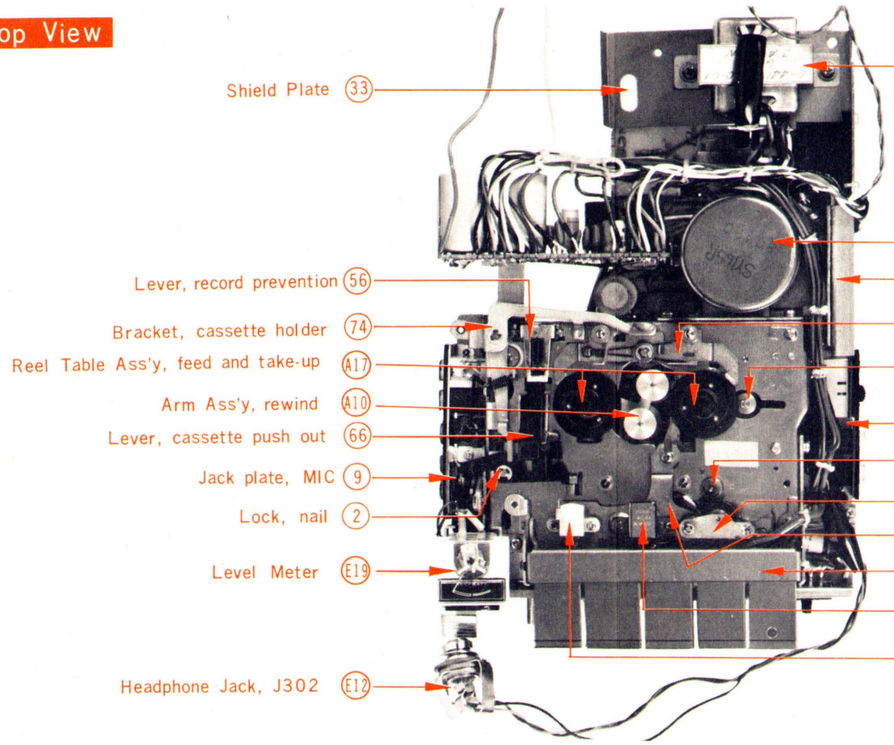
(Fig. 2)

Cabinet Bottom View



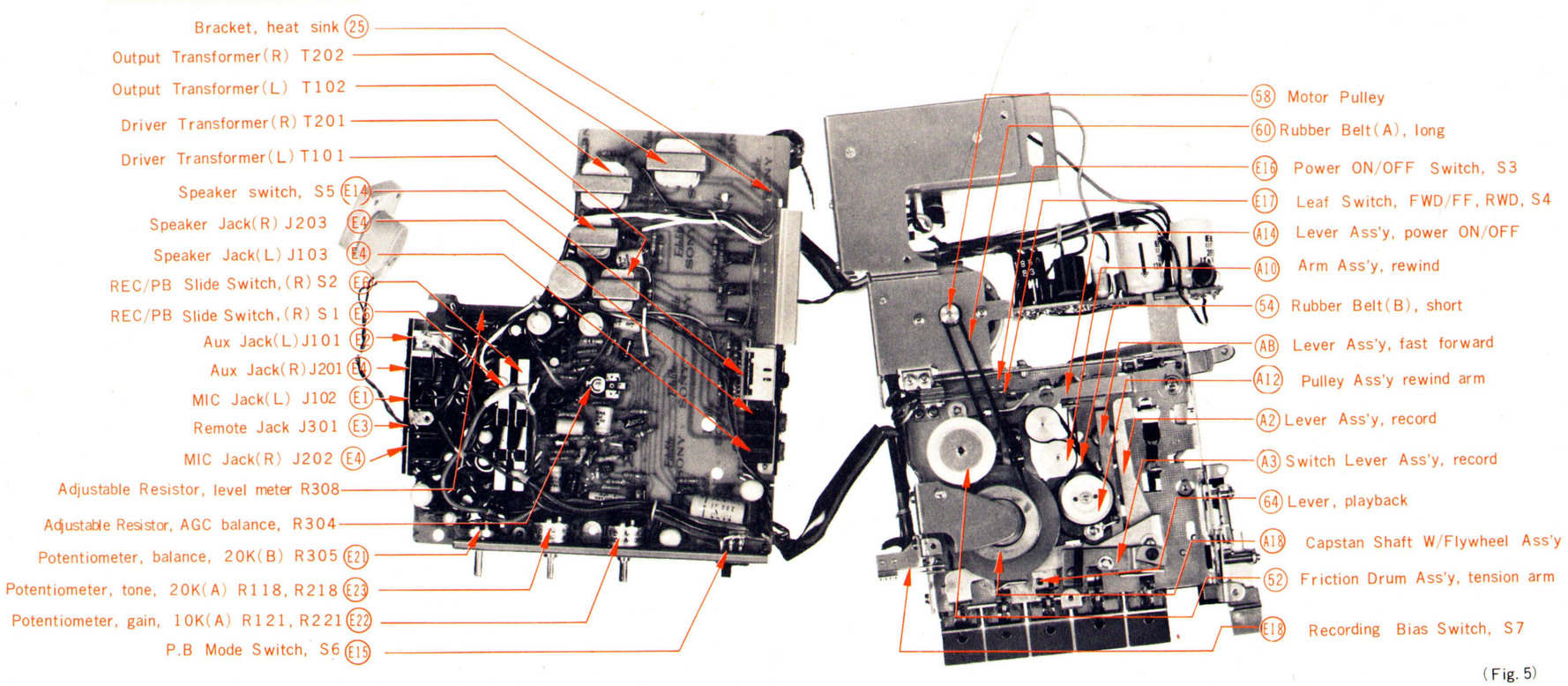
(Fig. 3)

Chassis Top View



(Fig. 4)

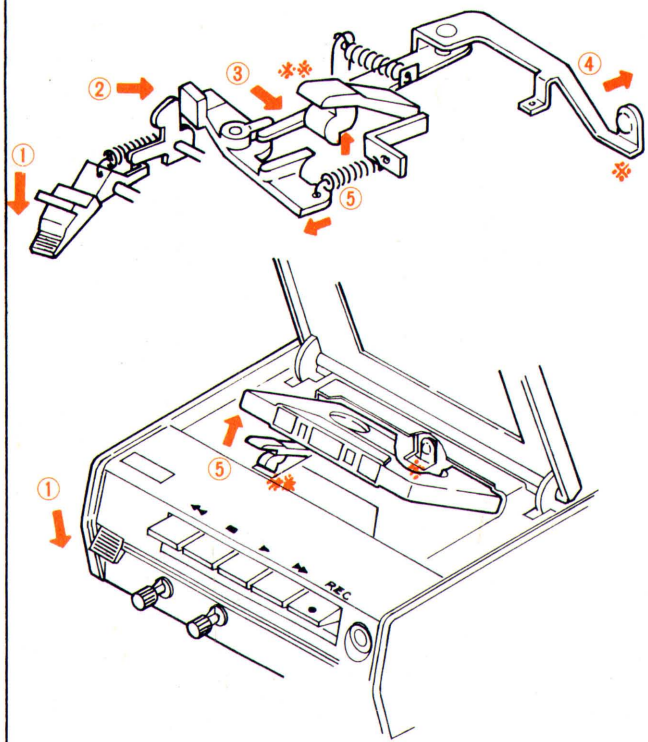
Chassis Bottom View


Bracket, heat sink (25)
Output Transformer(R) T202
Output Transformer(L) T102
Driver Transformer(R) T201
Driver Transformer(L) T101
Speaker switch, S5 (E14)
Speaker Jack(R) J203 (E4)
Speaker Jack(L) J103 (E4)
REC/PB Slide Switch,(R) S2 (E6)
REC/PB Slide Switch,(R) S1 (E6)
Aux Jack(L)J101 (E2)
Aux Jack(R)J201 (E4)
MIC Jack(L) J102 (E1)
Remote Jack J301 (E3)
MIC Jack(R) J202 (E4)
Adjustable Resistor, level meter R308
Adjustable Resistor, AGC balance, R304
Potentiometer, balance, 20K(B) R305 (E21)
Potentiometer, tone, 20K(A) R118, R218 (E23)
Potentiometer, gain, 10K(A) R121, R221 (E22)
P.B Mode Switch, S6 (E15)
(58) Motor Pulley
(60) Rubber Belt(A), long
(E16) Power ON/OFF Switch, S3
(E17) Leaf Switch, FWD/FF, RWD, S4
(A14) Lever Ass'y, power ON/OFF
(A10) Arm Ass'y, rewind
(54) Rubber Belt(B), short
(A8) Lever Ass'y, fast forward
(A12) Pulley Ass'y rewind arm
(A2) Lever Ass'y, record
(A3) Switch Lever Ass'y, record
(64) Lever, playback
(A18) Capstan Shaft W/Flywheel Ass'y
(52) Friction Drum Ass'y, tension arm
(E18) Recording Bias Switch, S7

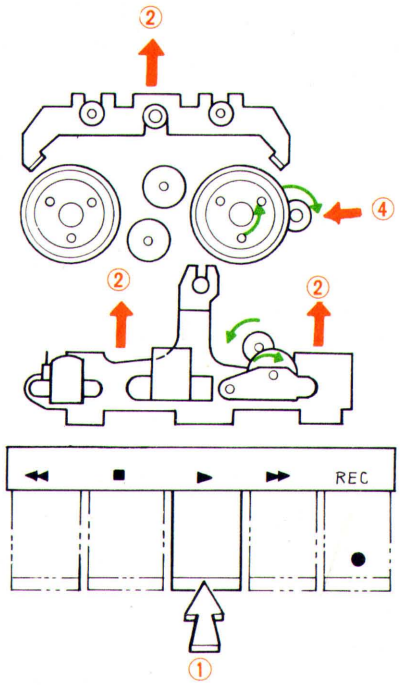
(Fig. 5)

Mechanical Functions

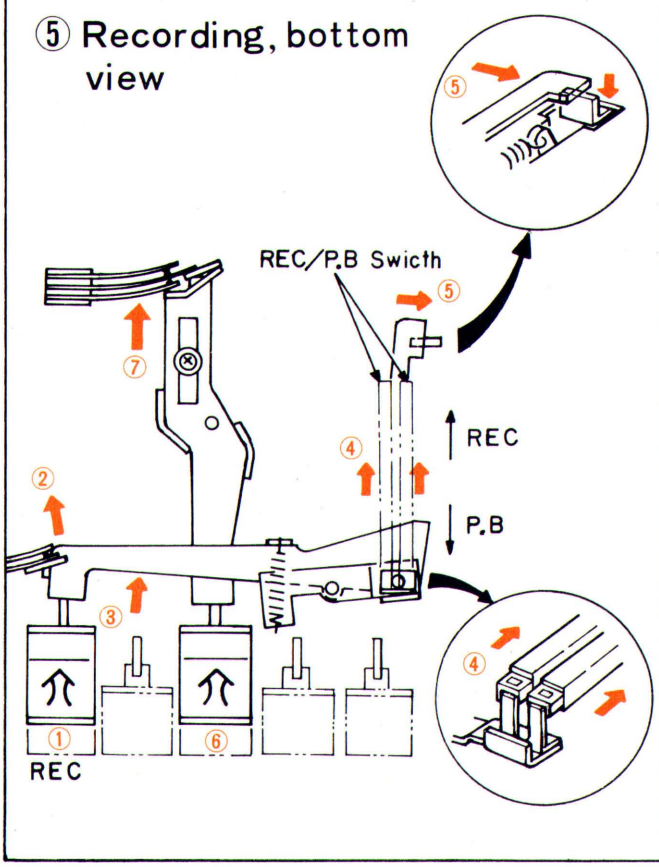
① Cassette push-out, top view



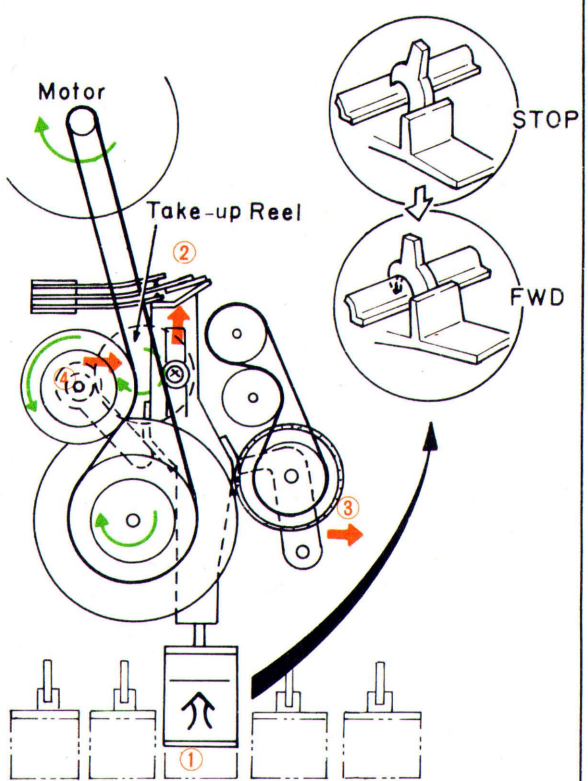
② FWD, top view



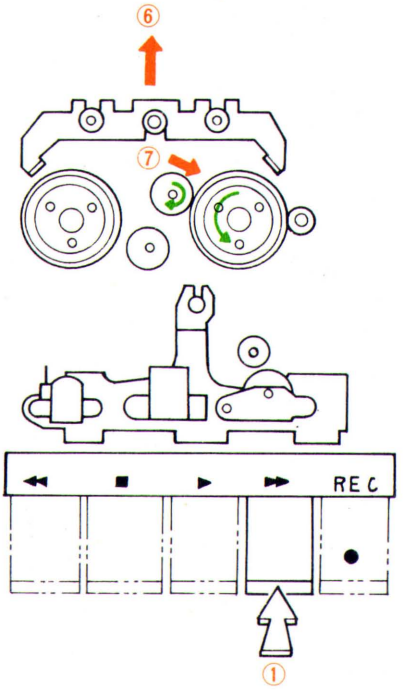
⑤ Recording, bottom view



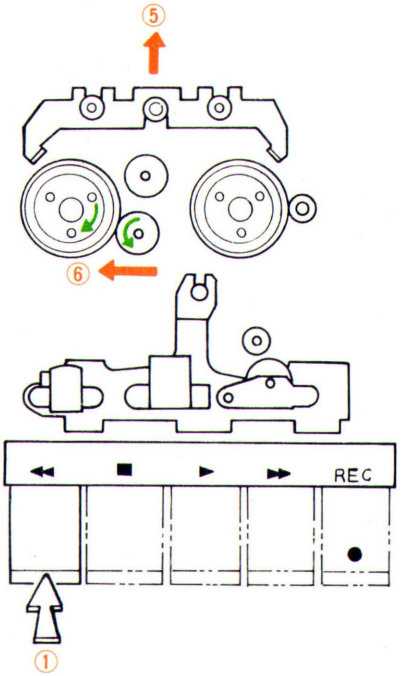
⑥ FWD, bottom view



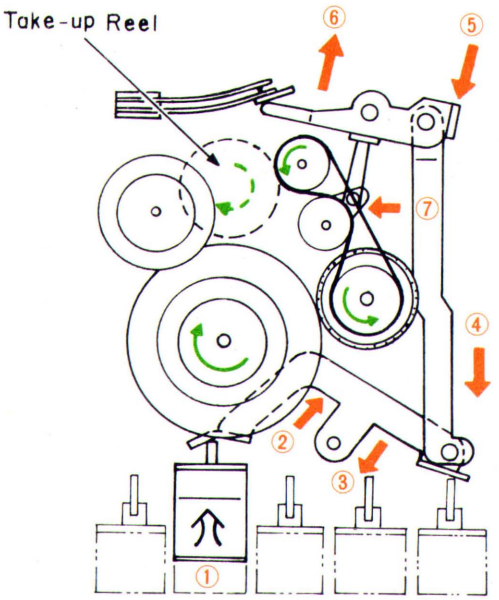
③ FF, top view



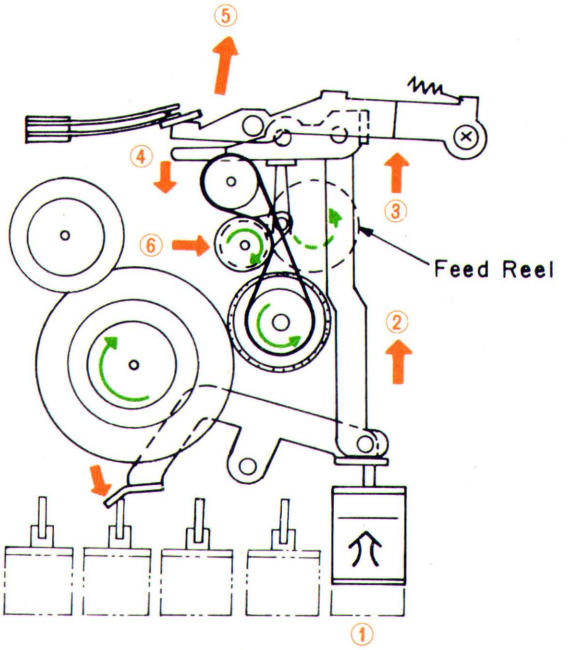
④ RWD, top view



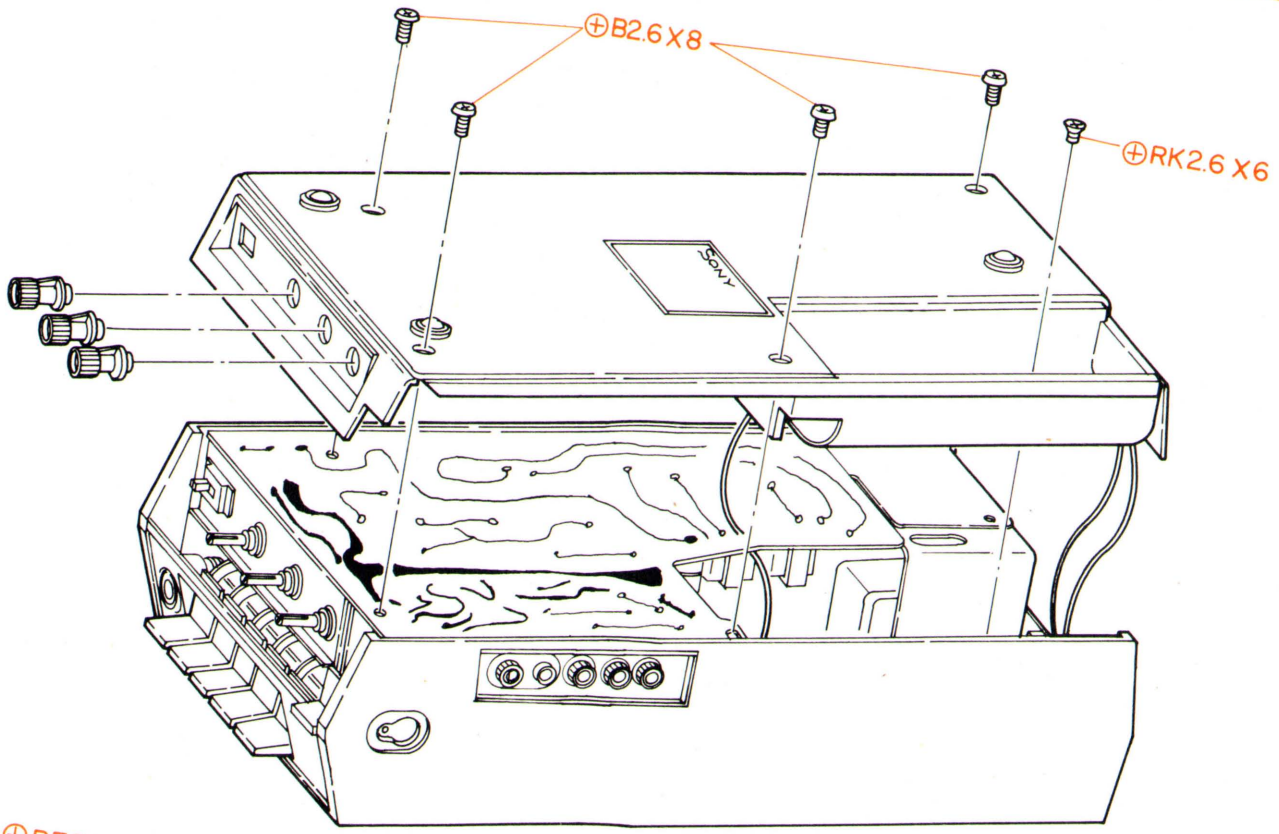
⑦ FF, bottom view



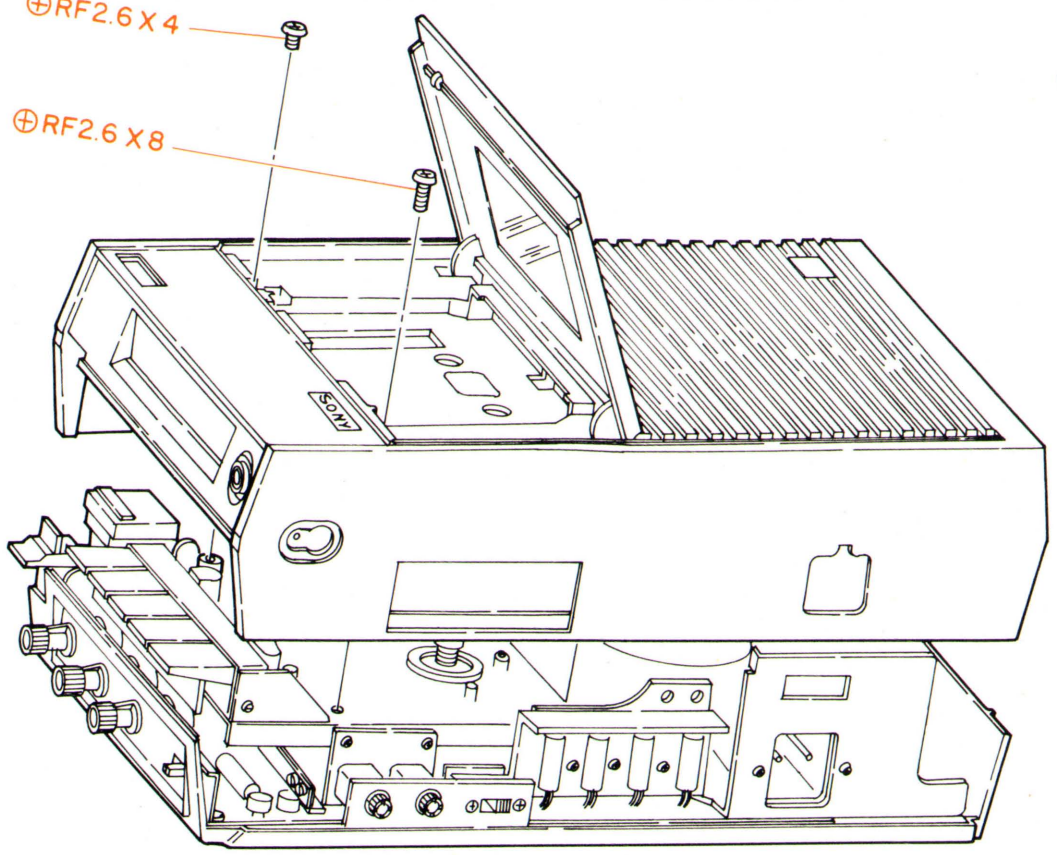
⑧ RWD, bottom view



Removal of Cabinet



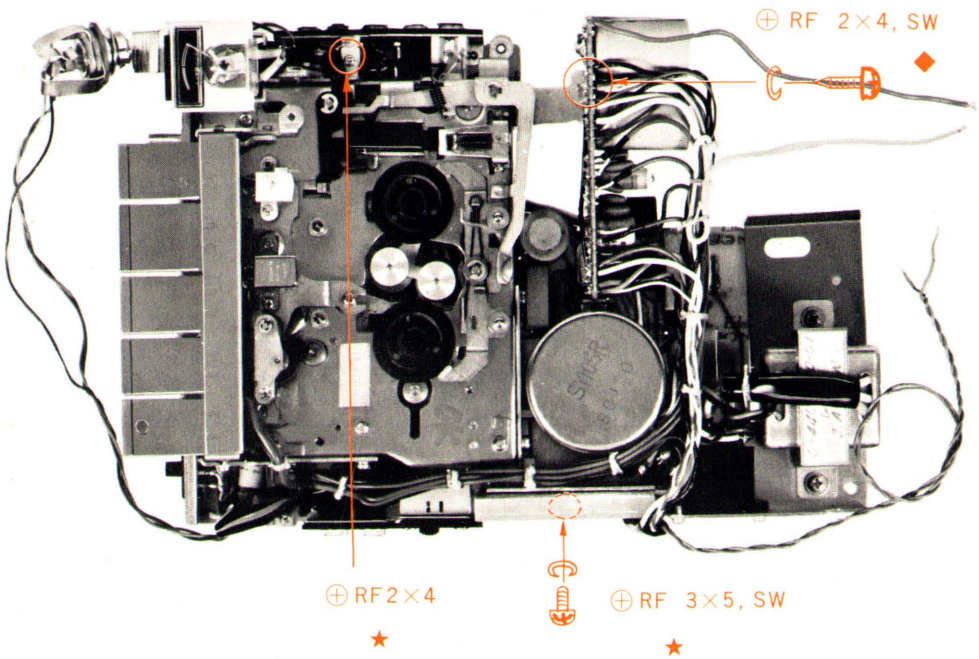
(Fig. 6)



(Fig. 7)

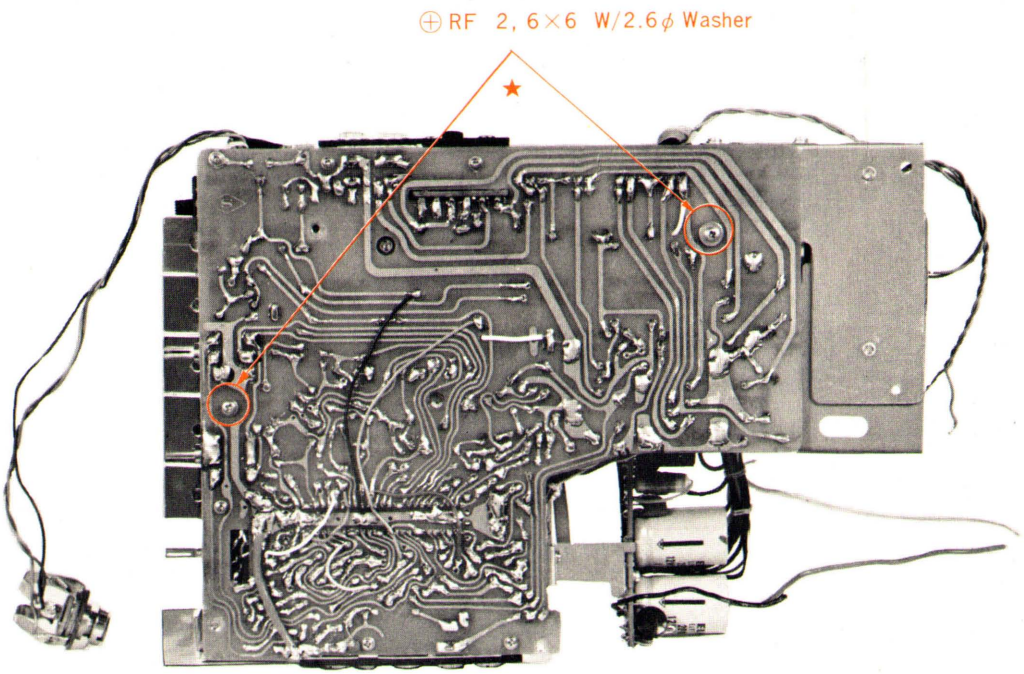
Removal of Mounted Circuit Board

BIAS OSC & Power Supply Mounted Circuit Board can be removed by unscrewing one screw marked with ◆



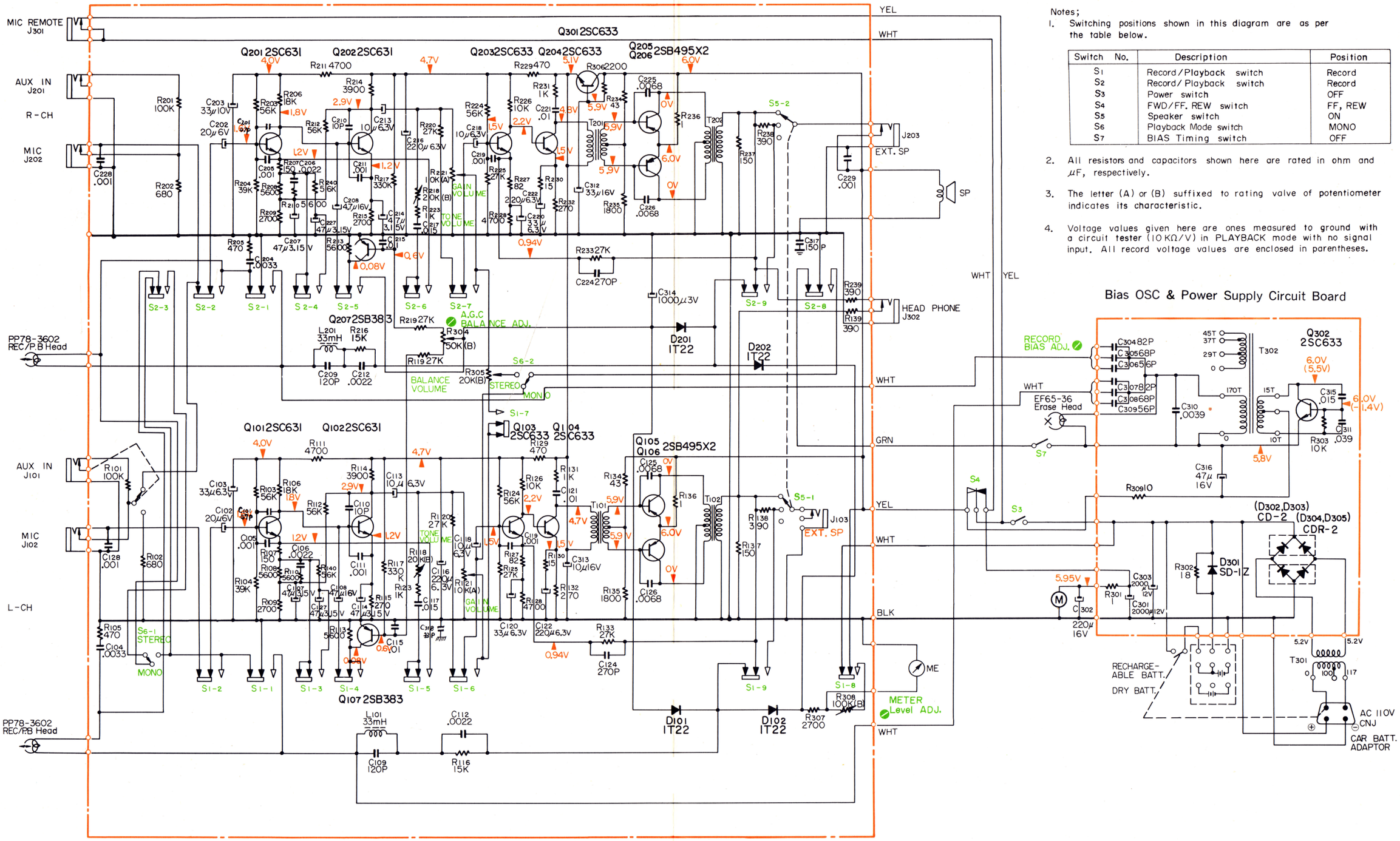
(Fig. 8)

Amplifier Mounted Circuit Board can be removed by unscrewing four screws marked with ★



(Fig. 9)

Schematic Diagram



Notes;

1. Switching positions shown in this diagram are as per the table below.

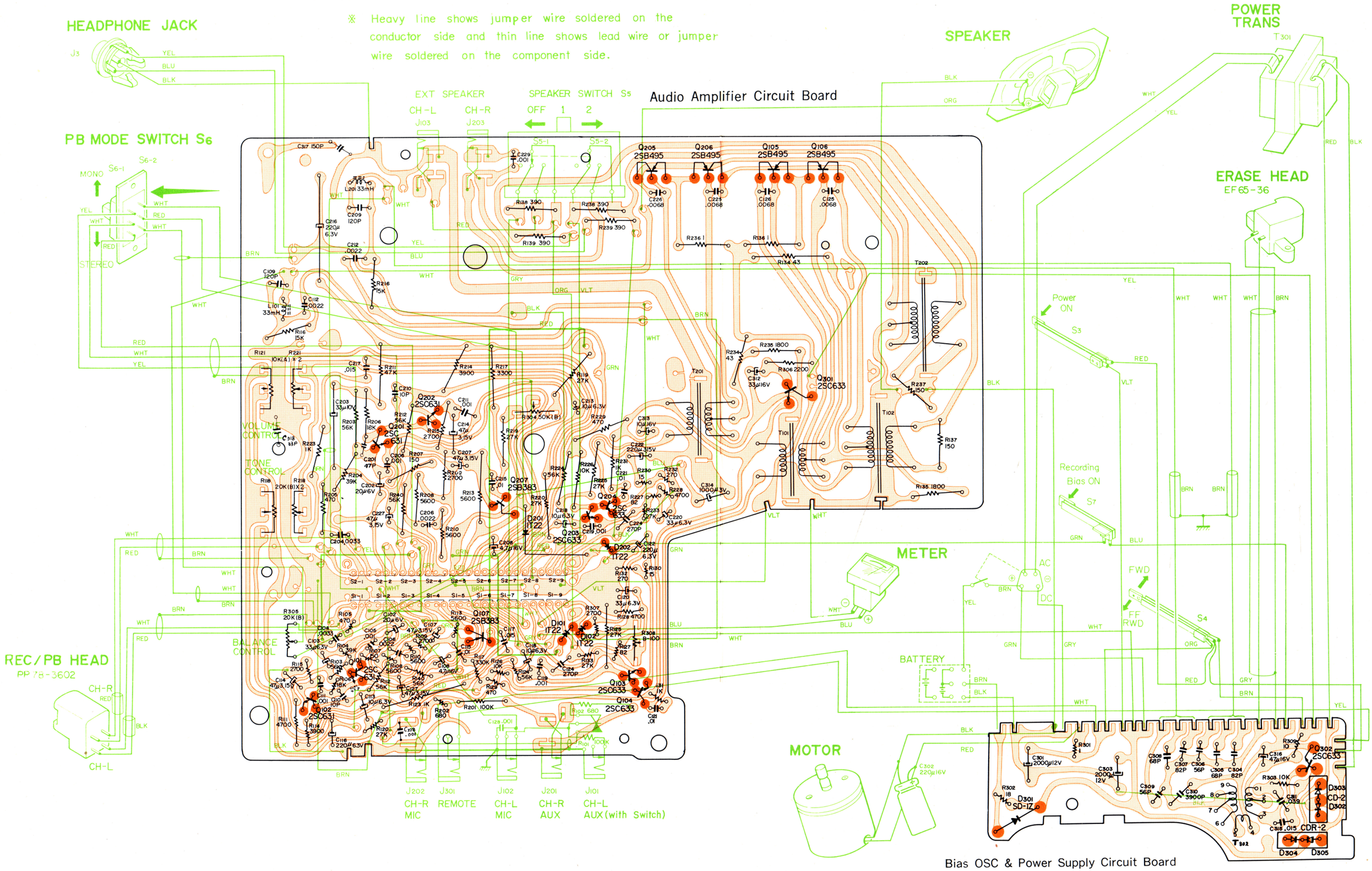
Switch No.	Description	Position
S1	Record/Playback switch	Record
S2	Record/Playback switch	Record
S3	Power switch	OFF
S4	FWD/FF. REW switch	FF, REW
S5	Speaker switch	ON
S6	Playback Mode switch	MONO
S7	BIAS Timing switch	OFF

2. All resistors and capacitors shown here are rated in ohm and μF, respectively.
3. The letter (A) or (B) suffixed to rating valve of potentiometer indicates its characteristic.
4. Voltage values given here are ones measured to ground with a circuit tester (10 KΩ/V) in PLAYBACK mode with no signal input. All record voltage values are enclosed in parentheses.

Mounting Diagram

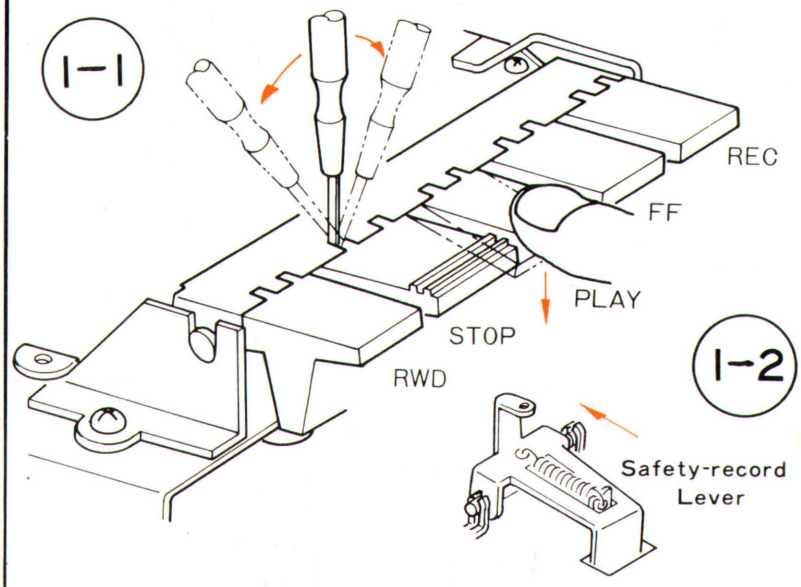
— Conductor Side —

※ Heavy line shows jumper wire soldered on the conductor side and thin line shows lead wire or jumper wire soldered on the component side.



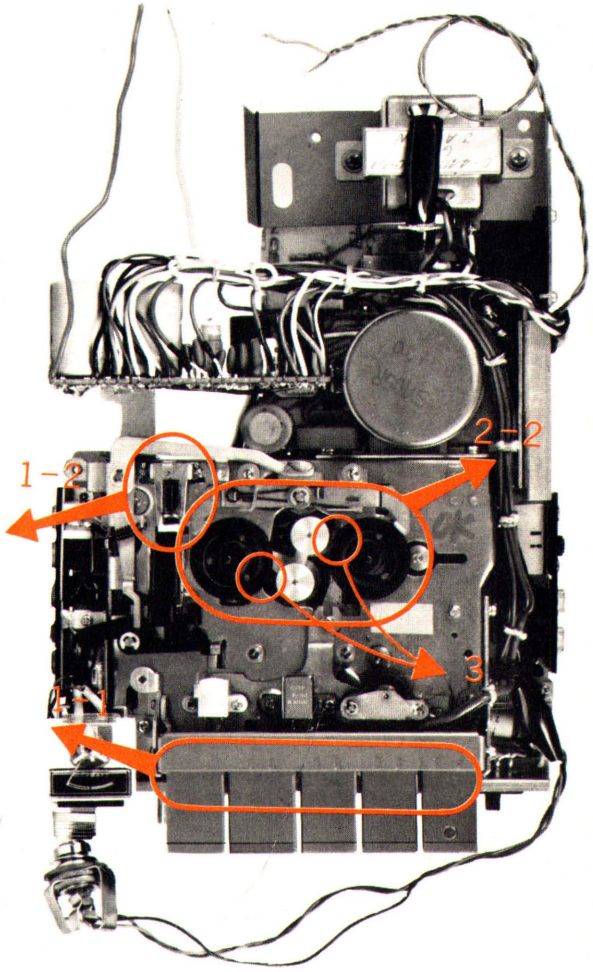
Mechanical Adjustment

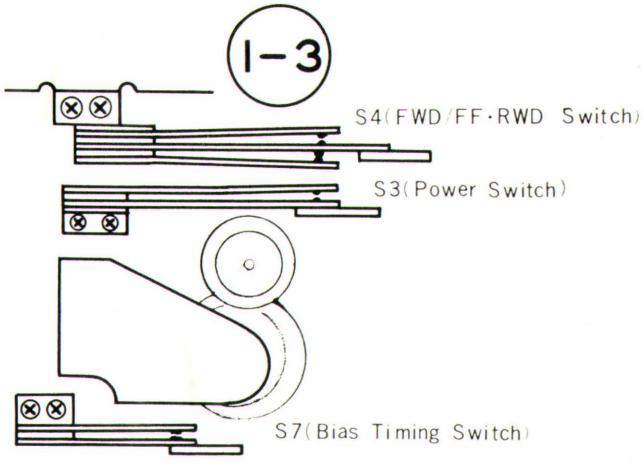
Key Operation and Height



Check to make sure that:

1. "PLAY" and "REC" keys can be released by depressing any other key.
   If not, replace Lock Plate (A9 X-34500-11). See Page 23.
2. "REC" key can be locked when it is depressed by pushing the safety-record lever in the direction of arrow.
   If not, be sure that REC Lever is not bent. See Fig. 11.
   Note "RWD", "FF" and "STOP" keys cannot be locked.
3. Check all the keys to see if they are at one and the same height.
   To adjust the height of any key, bend up or down the tongued portion of the holder by using a screw driver.

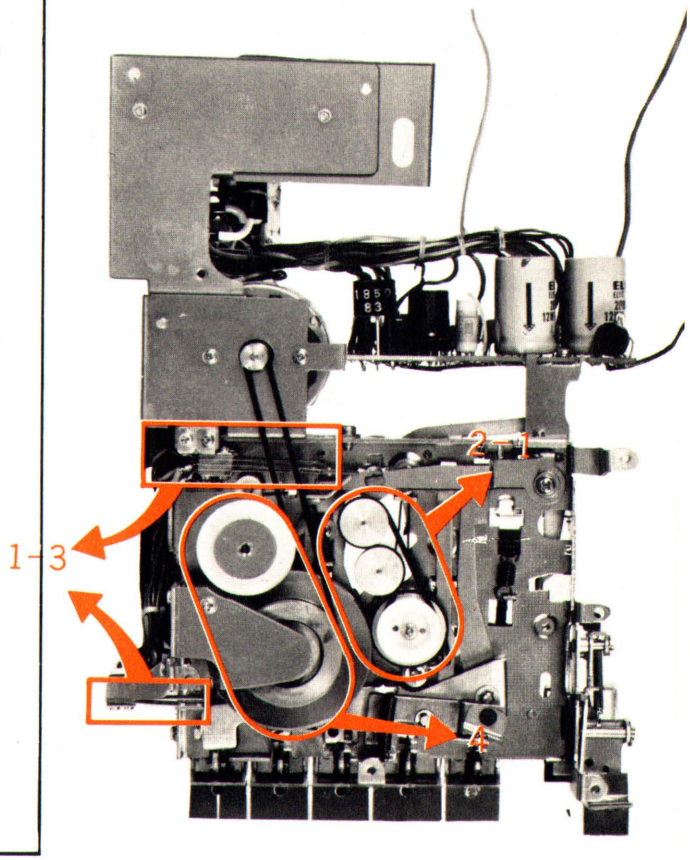




Check as follow.

	STOP	FF	RWD	P·B	REC
S3	OFF	ON	ON	ON	ON
S7	OFF	OFF	OFF	OFF	ON
S4					

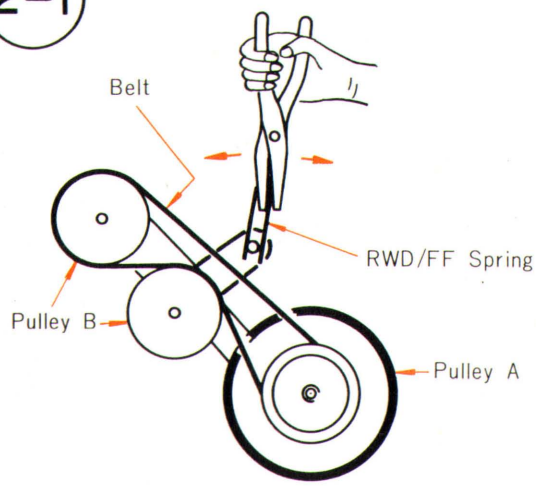
If not, loosen the Screws and adjust by positioning the switch



Pulley-To-Reel Clearance Adjustment

in STOP mode

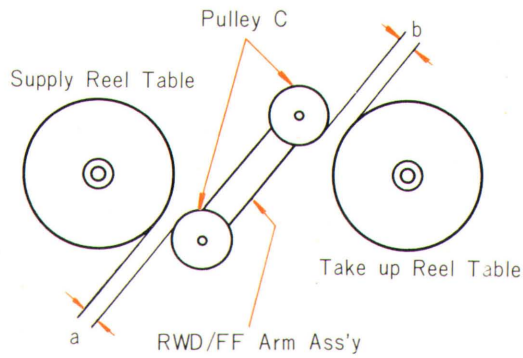
2-1



Adjust the clearance by bending RWD/FF spring.

NOTE: This adjustment is to be made in "STOP" mode.

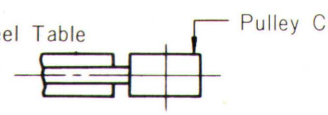
2-2



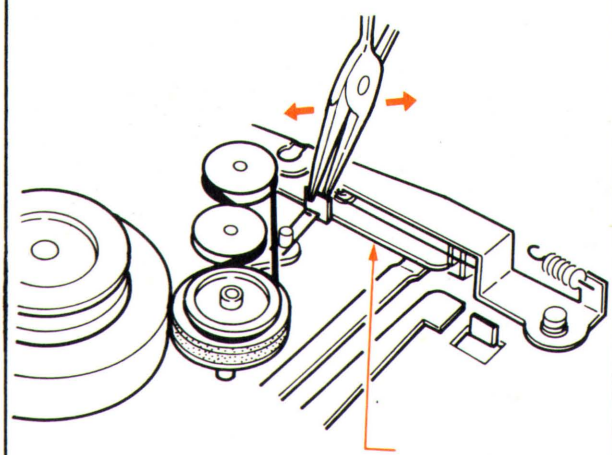
Clearance "b" must be greater than "a". The pulleys "C" must not come in contact with the reel tables.

Pulley C Height Adjustment

3



2-1



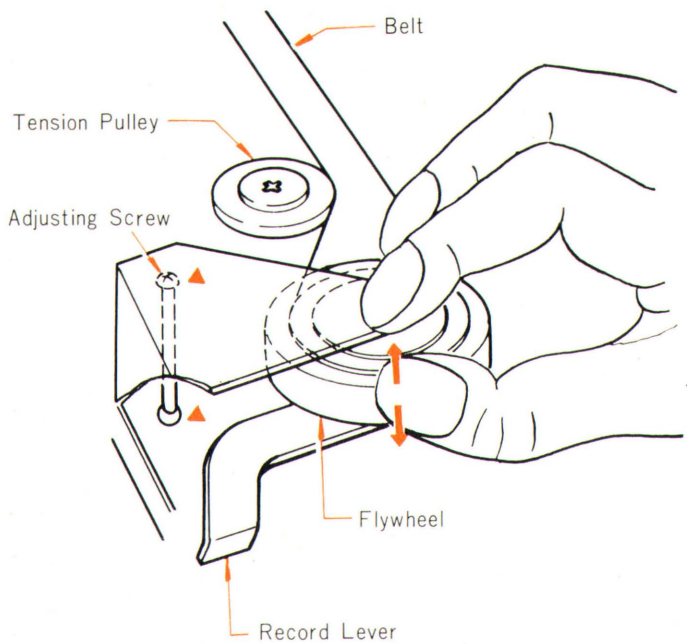
Bend RWD/FF lever tab in either direction.

Flywheel End Play Adjustment

4

in STOP mode

NOTE: This adjustment is to be made in "STOP" mode



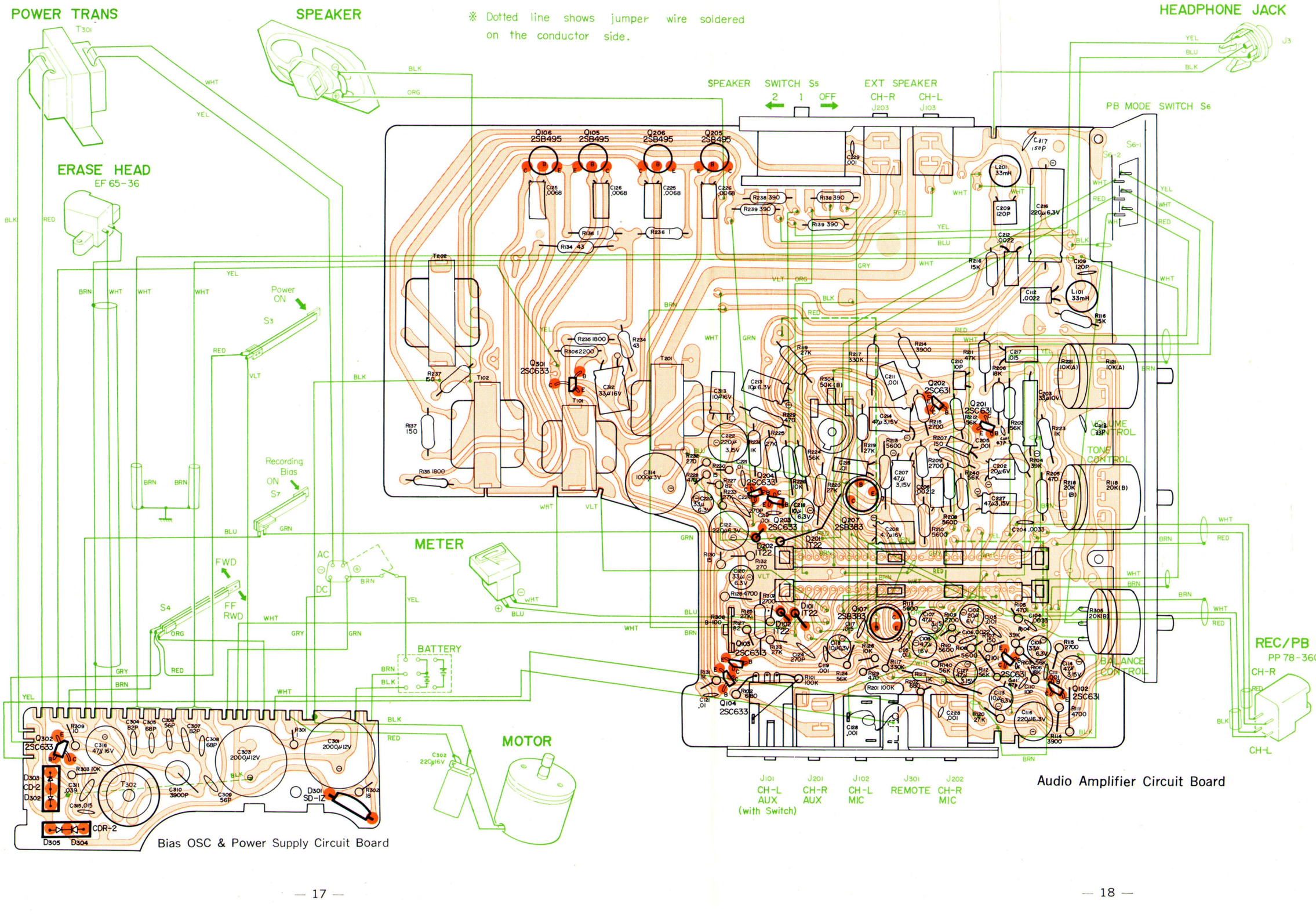
The play must be anywhere between 0.2 and 0.5 mm.

To adjust, turn the adjusting screw in or out.

Mounting Diagram

— Component Side —

※ Dotted line shows jumper wire soldered on the conductor side.



Bias OSC & Power Supply Circuit Board

Audio Amplifier Circuit Board

Electrical Adjustment

Item	Signal Source	Output Connection	Mode	Adjust	Remarks
1. HEAD AZIMUTH ALIGNMENT	SONY Alignment Tape P-4-A81	Oscilloscope, V.T.V.M. and 8 ohm Resistor to Speaker Out Jack.	PLAY-BACK	Azimuth Alignment Screw (See Fig. 12)	1. Set the Tone Control Knob to position "H", the Balance Volume to center position and the speaker switch to position "I". 2. Adjust the Screw to obtain maximum reading on V.T.V.M. 3. Adjust the Screw to obtain the Lissajous figure shown in the Fig. 15 on the oscilloscope.
2. AGC BALANCE ADJUSTMENT	1kHz, -40 dBs (7.75 mV) to MIC INPUT (CH-R)	V.T.V.M. and 8 ohm Resistor to Speaker Out Jack.	RECORD	R_{304} 50 k ohms (See Fig. 13)	Adjust to obtain the same Level on Channel—R and Channel—L.
3. RECORDING BIAS ADJUSTMENT	1kHz, 200 Hz and 7 kHz, -90 dBs (24.5μV) to MIC INPUT (CH-R)	V.T.V.M. and 8 ohm Resistor to Speaker Out Jack.	RECORD and PLAY-BACK	C_{304}~C_{306} (R-CH) C_{307}~C_{309} (L-CH) (See Fig. 14)	1. Set the Speaker Switch to position "2" or "OFF". 2. Record 1 kHz, 200 Hz and 7 kHz of -90 dBs (24.5μV) on a blank tape through MIC Jack (CH-R). 3. After recording, set the Balance Volume to position "R" ("L") and the Speaker Switch to position "I". 4. Playback 1 kHz signal and set the Gain Volume to obtain -20 dBs (0.0245 V) reading on V.T.V.M. 5. Playback 200 Hz and 7 kHz, and check as follows. 200 Hz→-23 dBs±2 dB 7 kHz→+-19 dBs±3 dB 6. If not, adjust by changing the connection of $C_{304\sim306}$ ($C_{307\sim309}$).
4. BATTERY INDICATOR ADJUSTMENT	Regulated Power Source 4.4V to DC INPUT		PLAY-BACK	R_{308} 100 k ohms	1. Feed DC 3.4V $^{+0}_{-2.0}$ and place the set in the Forward mode. 2. Adjust the Resistor R_{308} so that the pointer of the Level Meter is just at the boundary between the red and the black portion.

NOTES: (1) Before making adjustments, be sure to clean heads with alcohol.

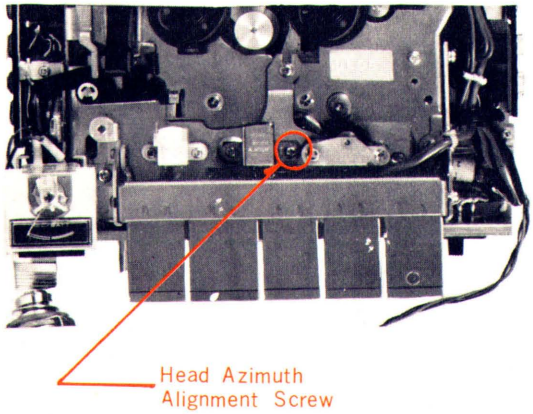
(2) The adjustments should be made in numerical order.

(3) After adjustments, apply lock paint to the parts adjusted.

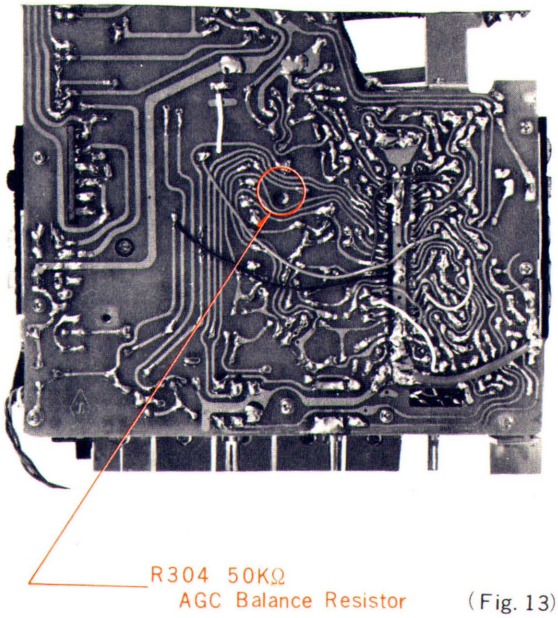
(4) The following test equipment is to be provided for these adjustments.

- Audio Generator
- Attenuator (600 ohms)
- V.T.V.M.
- Oscilloscope
- Resistors 600, 390, 6 & 8 ohms
- SONY Alignment Tape, P-4-A81
- Blank Tape (Cassette)

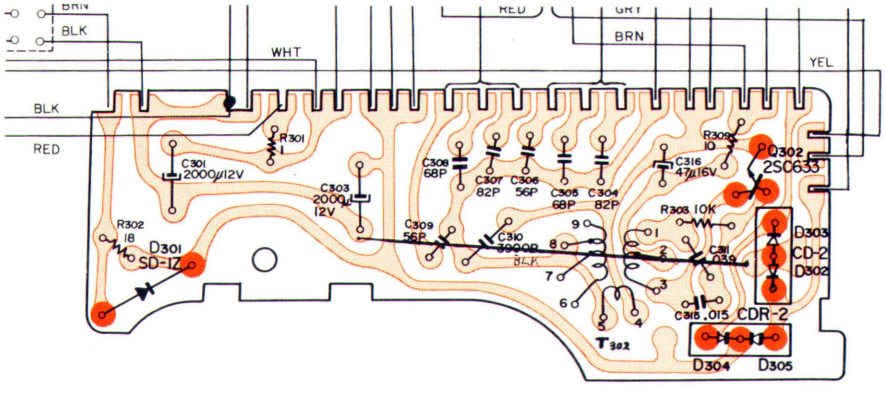
(5) Alignment equipment connection is shown in Fig. 15.



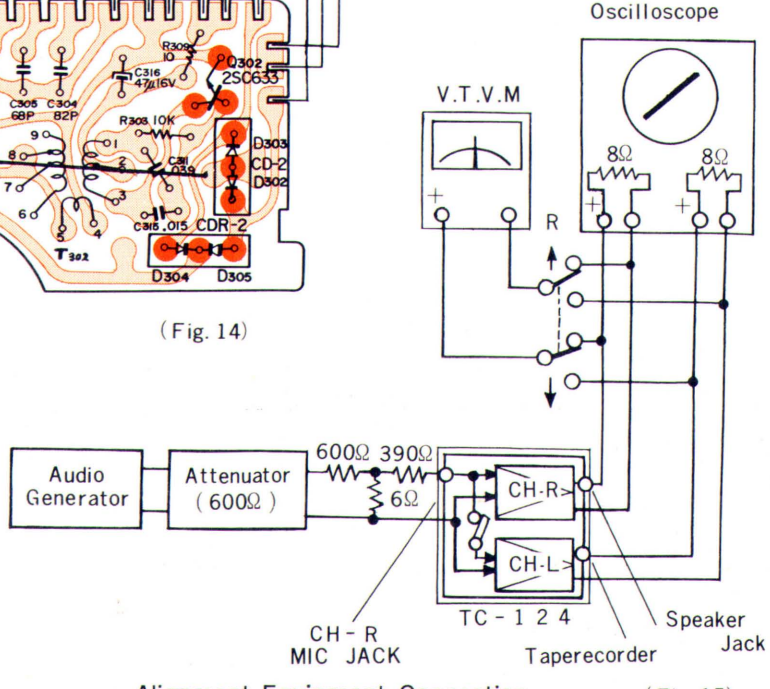
(Fig. 12)



(Fig. 13)

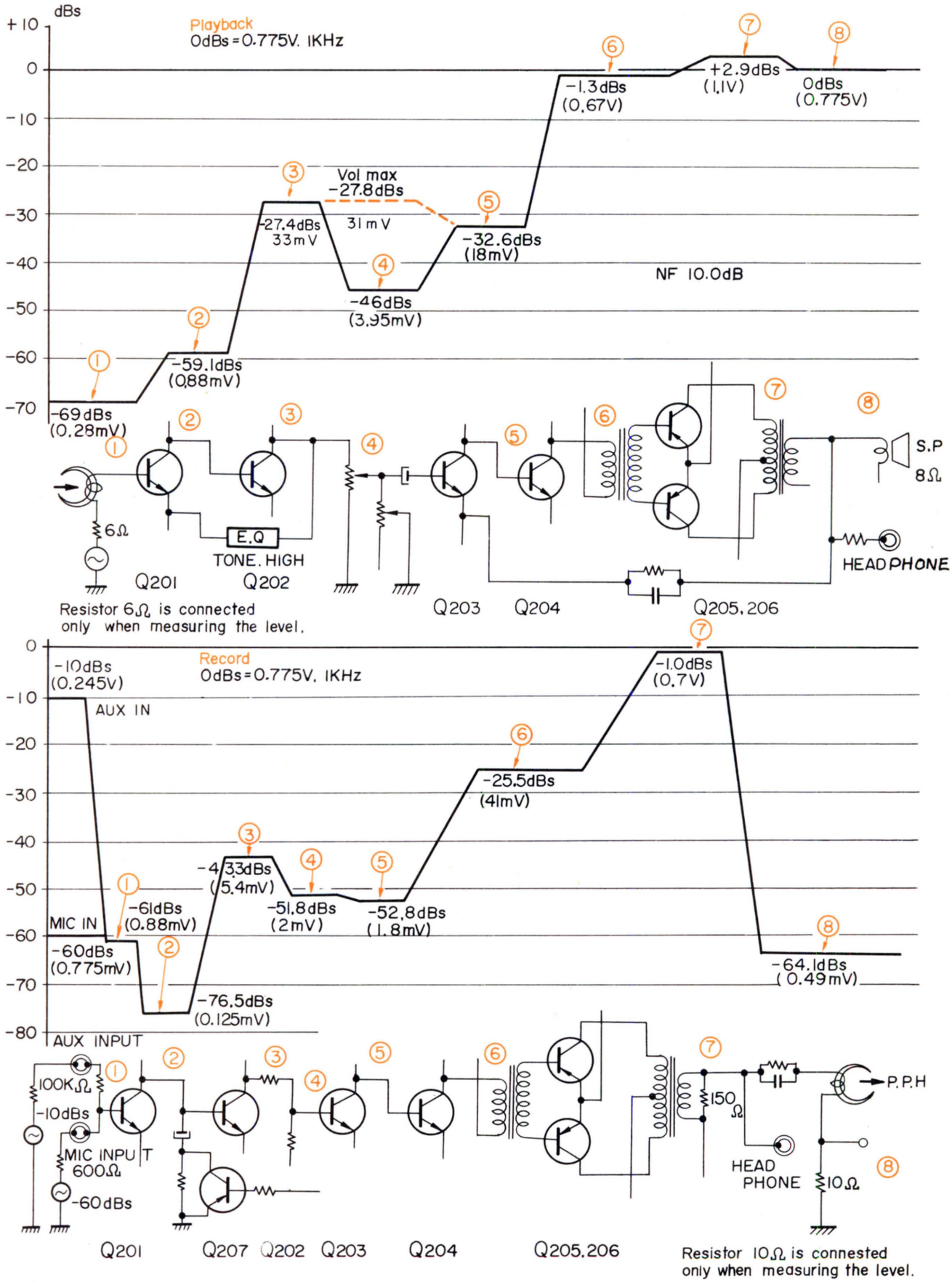


(Fig. 14)



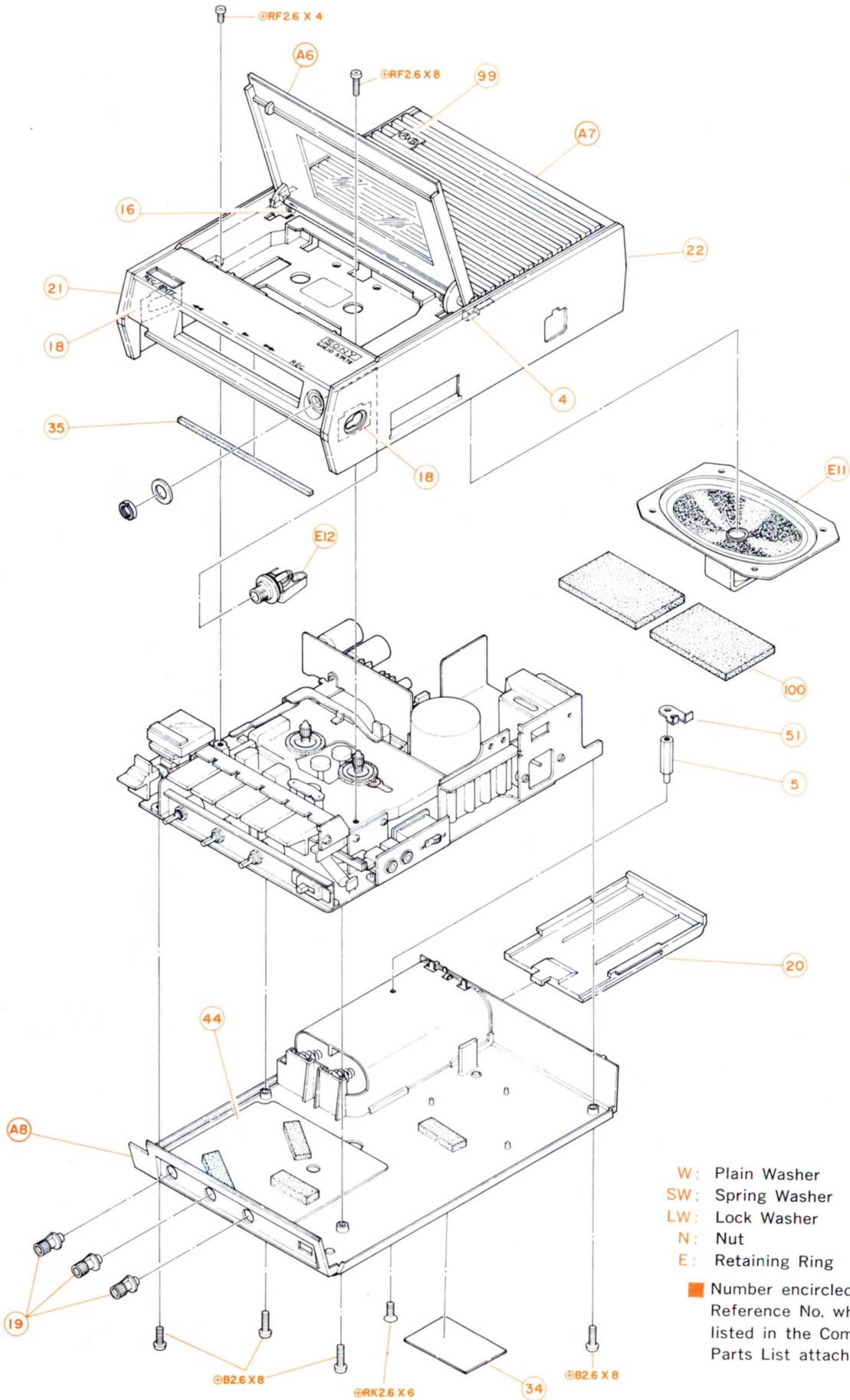
Alignment Equipment Connection (Fig. 15)

Level Diagram



Exploded Diagram

Cabinet—Top View

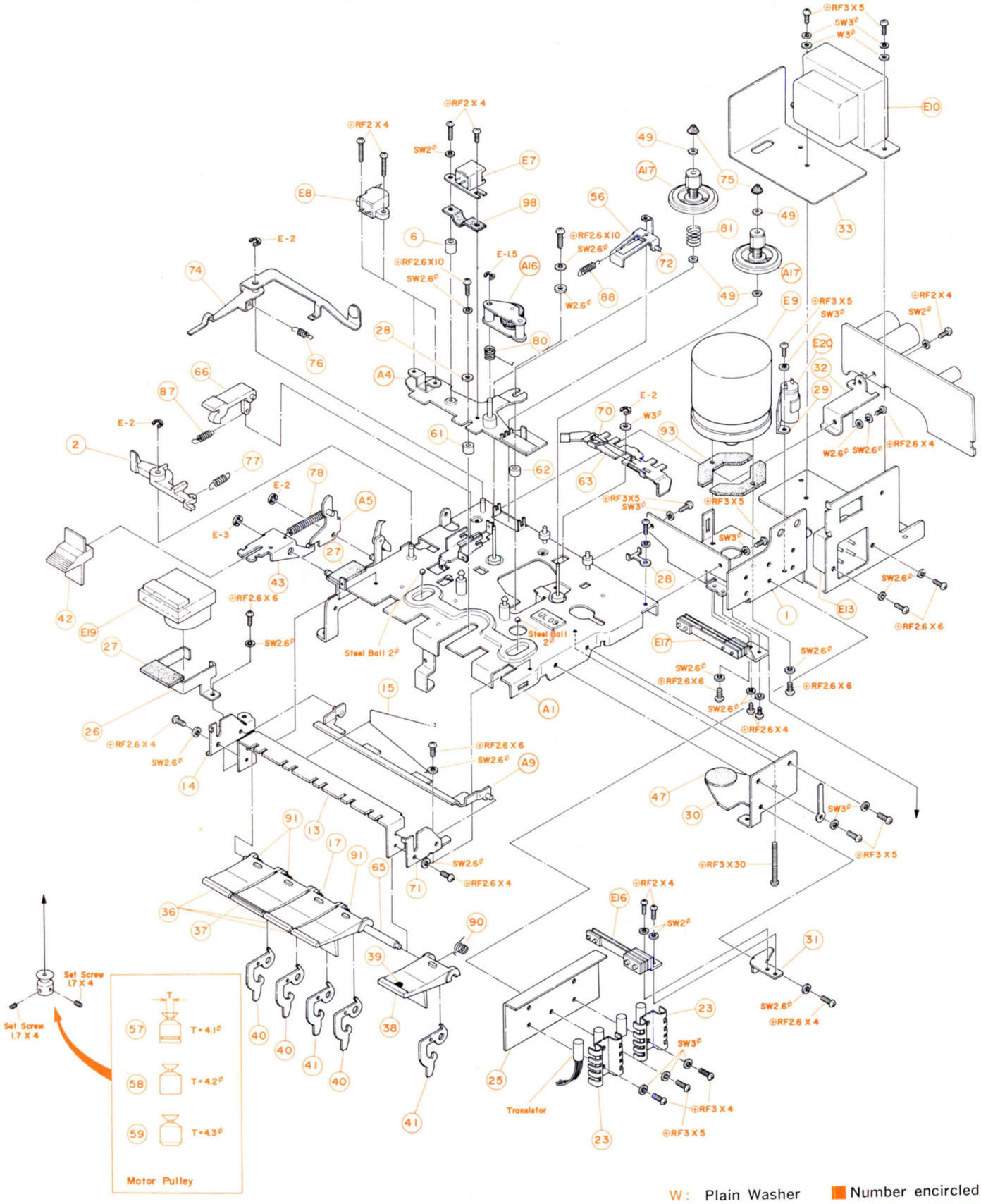


W: Plain Washer
SW: Spring Washer
LW: Lock Washer
N: Nut
E: Retaining Ring

■ Number encircled shows Reference No. which is listed in the Complete Spare Parts List attached hereto.

Exploded Diagram

Chassis—Top View

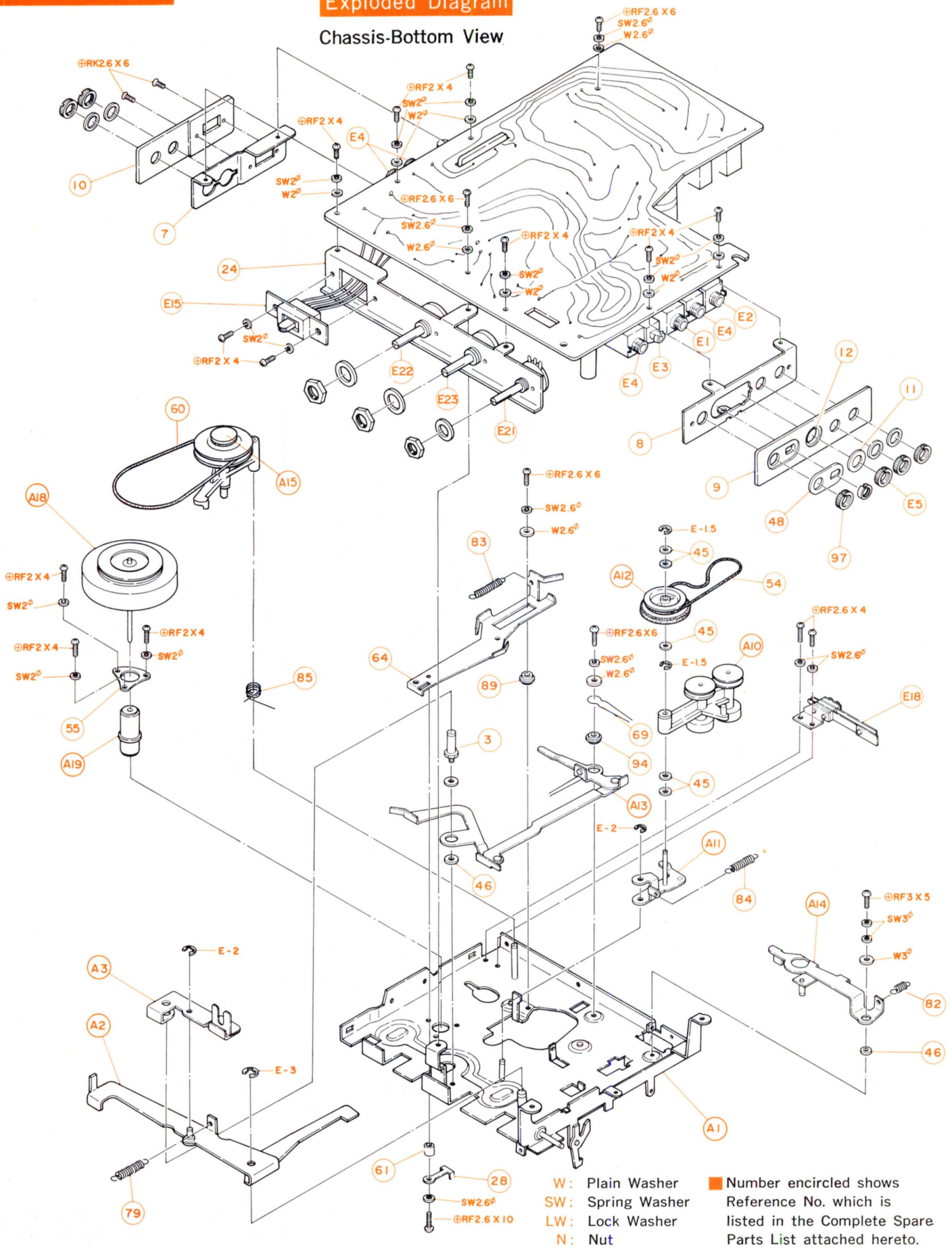


W: Plain Washer
SW: Spring Washer
LW: Lock Washer
N: Nut
E: Retaining Ring

■ Number encircled shows Reference No. which is listed in the Complete Spare Parts List attached hereto.

Exploded Diagram

Chassis-Bottom View



W: Plain Washer
SW: Spring Washer
LW: Lock Washer
N: Nut
E: Retaining Ring

■ Number encircled shows Reference No. which is listed in the Complete Spare Parts List attached hereto.

© 1968
Printed in Japan

SONY CORPORATION

COMPLETE SPARE PARTS LIST FOR TC-124CS

(for USA Model and CANADA Model)

MARCH, 1970

Ref. No.	Part No.	Description	Unit Price
		I. MECHANICAL PARTS	
A1	X-34500-01	Base Plate Ass'y A ----------	
A2	X-34500-04	Lever Ass'y, record ----------	
A3	X-34500-05	Switch Lever Ass'y, record ----------	
A4	X-34500-06	Head Deck Ass'y ----------	
A5	X-34500-07	Lever Ass'y, joint ----------	
A6	X-34500-08	Cabinet Cover Ass'y ----------	
A7	X-34500-09	Cabinet Ass'y, upper part ----------	
A8	X-34500-10	Cabinet Ass'y, lower part ----------	
A9	X-34340-20	Lock Plate Ass'y ----------	
A10	X-34340-04	Arm Ass'y, rewind ----------	
A11	X-34340-05	Lever Ass'y, rewind idler; A ----------	
A12	X-34340-06	Pulley Ass'y, rewind arm ----------	
A13	X-34340-07	Lever Ass'y, fast forward ----------	
A14	X-34340-09	Lever Ass'y, power ON/OFF ----------	
A16	X-34340-13	Pinch Roller Ass'y ----------	
A17	X-34340-15	Reel Table Ass'y, feed and take-up ----------	
A18	X-34340-22	Capstan Shaft w/ Flywheel Ass'y ----------	
A19	X-34340-23	Capstan Ass'y, sleeve----------	
A20	X-34340-34	Lug Ass'y, wire retainer ----------	
	X-34570-05-1	Button Ass'y ----------	
	X-34570-06-2	Arm Ass'y, tension ----------	
1	3-450-026	Bracket, motor ----------	
2	3-450-027	Lock Nail ----------	
3	3-450-028	Shaft, record lever ----------	
4	3-450-029	Retainer Shaft, cabinet cover ----------	
5	3-450-030	Support ----------	
6	3-450-031	Spacer, head ----------	
7	3-450-032	Bracket, jack ----------	
8	3-450-033	Bracket, mic jack ----------	
9	3-450-034	Plate, mic jack ----------	
10	3-450-035	Plate, jack ----------	
11	3-450-036	Ornamental Plate, record jack ----------	
12	3-450-037	Spacer ----------	
16	3-450-041	Spring, cabinet cover ----------	
18	3-450-043	Bracket, retainer belt ----------	
19	3-450-044	Knob, volume control ----------	

Ref. No.	Part No.	Description
20	3-450-045	Cover, battery
21	3-450-046	Ornamental Plate, left side
22	3-450-047	Ornamental Plate, right side
23	3-450-048	Heat Sink
24	3-450-049	Bracket, potentiometer
25	3-450-050	Bracket, heat sink
26	3-450-051	Bracket, VU meter
27	3-450-052	Cushion, VU meter
28	3-450-053	Wire Retainer
29	3-450-054	Bracket, electrolytic capacitor
30	3-450-055	Thrust Plate
31	3-450-056	Bracket, timing switch
32	3-450-057	Bracket A, OSC.
33	3-450-058	Shield Plate
34	3-450-059-91	Label, specification (for USA Model)
	3-450-701	Label, specification (for CANADA Model)
36	3-450-061	Key, fast forward, FF, rewind
40	3-450-065	Control Lever, stop, FF, rewind
42	3-450-067	Button, cabinet cover
43	3-450-068	Lever, cabinet cover
44	3-450-069	Shield Plate, A
45	3-405-458	Idler, thrust washer
46	3-423-058	Collar, switch lever
47	3-423-138	Spacer, capstan holder
48	3-425-138	Spacer, mic input & remote control jack; red-
49	3-434-021	Washer, nylon
50	3-434-047	Washer, nylon
54	3-434-103	Rubber Felt (B), short
55	3-434-104	Plate, capstan sleeve holder
56	3-434-105	Lever, recording stopper, prevention
57	3-434-106	Pulley, motor
58	3-434-107	Pulley, motor
59	3-434-108	Pulley, motor
60	3-434-110	Rubber Belt (A), long
61	3-434-111	Collar (A), head deck
62	3-434-112	Collar (B), head deck
63	3-434-113	Brake Block
64	3-434-114	Lever, playback
66	3-434-118	Lever, cassette push out
67	3-434-119	Felt, tension
69	3-434-121	Spring, fast forward rewind reset
70	3-434-122	Spring, brake block
72	3-434-126	Shaft, recording stop lever
75	3-434-134	Reel Cap

Ref. No.	Part No.	Description
76	3-434-137	Helical Spring, cassette holder
77	3-434-138	Helical Spring, lock nail
79	3-434-140	Helical Spring, recording lever
80	3-434-143	Spring, pinch roller adjusting
81	3-434-144	Pressure Spring, reel table adjusting
82	3-434-145	Helical Spring, switch lever
83	3-434-146	Helical Spring, playback lever
84	3-434-147	Helical Spring, rewind idler
85	3-434-148	Spring, tension arms
87	3-434-150	Helical Spring, tape push out
88	3-434-151	Helical Spring, recording stop lever
89	3-434-153	Spacer C, playback lever
92	3-434-185	Collar
93	3-434-197	Damper, motor
94	3-434-202	Spacer (E), FF lever
95	3-434-204	Cushion
96	3-434-205	Vibration Absorber, speaker
97	3-436-087	Nut, special
99	3-440-206	Label, easy-matic (for USA Model)
	3-434-804	Label, easy-matic (for CANADA Model)
	3-450-088-01	Plate, cabinet reinforcement
	3-450-315-01	Plate, insulator
	3-457-016-01	Plate, spring
	3-423-129-02	Absorber, vibration
	3-423-161-01	Absorber, vibration
	3-423-147-01	Washer 6 ϕ
	3-423-162-01	Cushion, noise absorber
	3-423-166-01	Rubber
	3-423-325-02	Cushion, noise absorber
	3-445-036-03	Retainer, cassette
	3-445-072-01	Washer
	3-453-132-01	Cover, head
	3-445-074-01	Washer, nylon
	3-434-196-01	Absorber, vibration
	3-434-236-01	Washer
	3-464-155-01	Cushion, top cover
	3-450-079-01	Washer, knob
	3-450-080-01	Protector, head
	3-450-082-02	Retainer, speaker
	3-450-083-01	Washer, fiber
	3-450-084-01	Cushion, noise absorber
	3-450-085-01	Cushion, noise absorber
	3-450-086-01	Cushion, noise absorber

Ref. No.	Part No.	Description
	Hardwares	
		Screw
	7-621-255-25	(+) P 2 x 4
	7-621-255-45	(+) P 2 x 6
	7-621-259-25	(+) P 2.6 x 4
	7-621-259-55	(+) P 2.6 x 8
	7-621-259-63	(+) P 2.6 x 10
	7-621-262-65	(+) P 3 x 30
	7-621-559-45	(+) K 2.6 x 6
	7-621-559-65	(+) K 2.6 x 10
	7-621-714-28	(-) Set 1.7 x 4
	7-621-770-99	(+) B 2.6 x 8
		Washer
	7-623-107-22	2.6 ϕ
	7-623-108-22	3 ϕ
		Spring Washer
	7-623-205-22	2 ϕ
	7-623-207-22	2.6 ϕ
		Retaining Ring
	7-624-104-01	E-2
	7-624-106-01	E-3
	7-624-102-01	E-1.5
		Screw
	7-628-251-15	(+) P 3 x 5 w/ SW
	7-621-659-49	(+) RK 2.6 x 6
	7-621-255-35	(+) P 2 x 5
	7-621-720-92	(+) K 2.3 x 5
	7-621-773-87	(+) B 2.6 x 10
	7-621-770-67	(+) B 2.6 x 6
	7-628-254-15	(+) P 2.6 x 6
	7-628-254-25	(+) P 2.6 x 8

Ref. No..	Part No.	Description
		Lug
	7-623-505-01	2 ϕ
	7-623-507-01	2.6 ϕ
		Nut
	7-622-107-01	N 2.6 ϕ
		Steel Ball
	7-671-112-01	2 ϕ
		Accessories
	3-790-269-91	Manual, instruction (for USA Model)
	3-790-269-43	Manual, instruction (for CANADA Model)
	3-701-035-30	Warranty Card (for CANADA Model)
	3-793-105	Warranty Station List (for CANADA Model)
	3-792-269	Tug, price (for CANADA Model)
	3-793-106	Guaranty Card (for CANADA Model)
	3-793-183	Inspection Card
	X-38282-11	Shoulder Band Ass'y
	3-450-077	Carrying Case
	3-450-076	Microphone Case
	3-450-078	Carrying Bag LC-3
	Y-20582-01-1	SS-12, speaker
	3-793-044	Important, carton (for USA Model)
	8-890-003-00	Cassette C-60 SS (for USA Model)
	8-893-302-00	Demonstration Tape, cassette stereo (for CANADA Model)
	8-811-997-00	F-99S, one point stereo microphone
	1-504-034-12	Magnetic Earphone ME-20
	1-528-026-11	Battery UM-2
	1-534-032-11 1-534-032-12	Connection Cord RK-50 -11; red Connection Cord RK-50 -12; black
	1-534-519-11	Power Cord 4P (for USA Model)
	1-534-519-21	Power Cord 4P (for CANADA Model)
	X-37010-18-2	Head Cleaning Rod Ass'y (for CANADA Model)

Ref. No.	Part No.	Description	
	Packing Materials		
	3-450-071-11	Carton	
	3-450-073	Sleeve, carrying back	
	3-450-074	Cushion	
	3-450-075	Bag, polyethylene	
	2-039-920	Bag, polyethylene	
	3-457-005	Cover, microphone	

II. ELECTRICAL PARTS

Circuit Board Audio Amp Section

	1-539-010-14	Printed Circuit Board	
		Transistor	
		2SB383	Q107,207
		2SC631	Q101,201,102,202
		2SC633	Q103,203,104,204,301
		2SB495	Q105,205,106,206
		Diode	
		1T22	D101,201,102,202
E21	1-221-536	Variable Resistor 20 kΩ-B	R305
	1-221-664	Carbon Resistor, semi-fixed 100 kΩ-B	R308
	1-221-953	Carbon Resistor, semi-fixed 50 kΩ-B	R304
E22	1-222-197	Variable Resistor, gain	10 kΩ-Ax2 R121,221
R23	1-222-198	Variable Resistor, tone	20 kΩ-Bx2 R118,218

Ref. No.	Part No.	Description	
	1-407-212	Micro Inductor	L101,201
	1-423-049	Transformer, input	T101,201
	1-427-142	Transformer, output	T102,202
E1	1-507-169	Jack, miniature	J102
E2	1-507-193	Jack, JM-35 M-7	J101
E3	1-507-195	Jack, special miniature (microphone) (remote control)	J301
E4	1-507-251	Jack, miniature	J201,202,203,103
E5	1-507-902	Jack, nut	J102
E6	1-514-454	Switch, slide	S1,2

Ceramic Capacitor

1-101-918	25 WV 0.001 µF +80 -20 %	C105,111,119,128, 205,211,219,228, 229

Mylar Capacitor

1-105-665-12) 1-106-066-12)	50 WV MFL 0.0022 µF ±10 %	C106,206,112, 212
1-105-667-12) 1-106-070-12)	50 WV MFL 0.0033 µF ±10 %	C104,204
1-105-671-12) 1-106-078-12)	50 WV MFL 0.0068 µF ±10 %	C125,225,126, 226
1-105-673-12) 1-106-082-12)	50 WV MFL 0.01 µF ±10 %	C115,215,121, 221
1-105-675-12) 1-106-086-12)	50 WV MFL 0.015 µF ±10 %	C117,217

Silvered Mica Capacitor

1-107-107	50 WV 10 pF ±10 %	C110,210
1-107-123	50 WV 47 pF ±10 %	C101,201
1-107-133	50 WV 120 pF ±10 %	C109,209
1-107-135	59 WV 150 pF ±10 %	C317
1-107-141	50 WV 270 pF ±10 %	C124,224

Electrolytic Capacitor

1-119-108	10 WV	33 µF	C203
1-119-069	6.3 WV	220 µF	C216
1-121-463) 1-121-394)	16 WV	4.7 µF	C108.208

Ref. No.	Part No.	Description		
	1-121-729) 1-121-468)	6.3 WV	10 µF	C113,213,118,218 ---
	1-121-471) 1-121-347)	16 WV	10 µF	C313 ----------
	1-121-476	6.3 WV	22 µF	C102,202 ----------
	1-121-482) 1-121-284)	6.3 WV	33 µF	C103,120,220 -------
	1-121-485) 1-121-350)	16 WV	33 µF	C312 ----------
	1-121-406) 1-121-287)	3.15 WV	47 µF	C107,114,127,207, 214,227 ----------
	1-121-419) 1-121-318)	6.3 WV	220 µF	C116,122,222 -------
	1-121-277	3 WV	1000 µF	C314 ----------
	1-121-413	6.3 WV	100 µF	C122,222 ----------
		Carbon Resistor		
	1-242-629	15 Ω ±5 %	ELR1/4.RD1/4UR	R130,230 --------
	1-242-647	82 Ω ±5 %	ELR1/4.RD1/4UR	R127,227 --------
	1-242-653	150 Ω ±5 %	ELR1/4.RD1/4UR	R107 ----------
	1-242-659	270 Ω ±5 %	ELR1/4.RD1/4UR	R132,232 --------
	1-242-665-32) 1-242-665-31)	470 Ω ±5 %	ELR1/4.RD1/4UR	R105 ----------
	1-242-665-12) 1-242-665-11)	470 Ω ±5 %	ELR1/4.RD1/4UR	R129 ----------
	1-242-669	680 Ω ±10 %	ELR1/4.RD1/4UR	R102,202 --------
	1-242-673	1 kΩ ±10 %	ELR1/4.RD1/4UR	R131 ----------
	1-242-683-12) 1-242-683-09)	2.7 kΩ ±5 %	ELR1/4.RD1/4UR	R109,115 --------
	1-242-687	3.9 kΩ ±5 %	ELR1/4.RD1/4UR	R114 ----------
	1-242-689-12) 1-242-689-11)	4.7 kΩ ±5 %	ELR1/4.RD1/4UR	R128,228 --------
	1-242-689-32) 1-242-689-31)	4.7 kΩ ±10 %	ELR1/4.RD1/4UR	R111 ----------
	1-242-691-12) 1-242-691-09)	5.6 kΩ ±5 %	ELR1/4.RD1/4UR	R108,110 --------
	1-242-691-32) 1-242-691-31)	5.6 kΩ ±10 %	ELR1/4.RD1/4UR	R113 ----------
	1-242-697-12) 1-242-697-11)	10 kΩ ±5 %	ELR1/4.RD1/4UR	R126 ----------
	1-242-703-12) 1-242-703-09)	18 kΩ ±5 %	ELR1/4.RD1/4UR	R106 ----------
	1-242-707-12) 1-242-707-11)	27 kΩ ±5 %	ELR1/4.RD1/4UR	R133,233 --------

Ref. No.	Part No.	Description			
	1-242-707-32) 1-242-707-31)	27 kΩ	±10 %	ELR1/4.RD1/4UR	R120 ----------
	1-242-711-12) 1-242-711-09)	39 kΩ	±5 %	ELR1/4.RD1/4UR	R104 ----------
	1-242-715-12) 1-242-715-09)	56 kΩ	±5 %	ELR1/4.RD1/4UR	R103,140 ------
	1-242-715-12) 1-242-715-11)	56 kΩ	±5 %	ELR1/4.RD1/4UR	R124 ----------
	1-242-715-32) 1-242-715-31)	56 kΩ	±10 %	ELR1/4.RD1/4UR	R112 ----------
	1-242-721-32) 1-242-721-31)	100 kΩ	±10 %	ELR1/4.RD1/4UR	R101 ----------
	1-242-733-32) 1-242-733-31)	330 kΩ	±10 %	ELR1/4.RD1/4UR	R117 ----------
	1-242-685-12) 1-242-685-09)	3.3 kΩ	±10 %	ELR1/4.RD1/4UR	R141,241 ------
	1-242-681-32) 1-242-681-31)	2.2 kΩ	±10 %	ELR1/4.RD1/4UR	R307 ----------
	1-244-601	1 Ω	±10 %	RD1/4SR	R136,236 ------
	1-244-640	43 Ω	±5 %	R1/4.RD1/4SR	R134,234 ------
	1-244-653	150 Ω	±5 %	R1/4.RD1/4SR	R137,237,207 --
	1-244-663	390 Ω	±10 %	R1/4.RD1/4SR	R138,238,239, 139 ----------
	1-244-665-12) 1-244-665-11)	470 Ω	±5 %	R1/4.RD1/4SR	R229 ----------
	1-244-665-32) 1-244-665-31)	470 Ω	±10 %	R1/4.RD1/4SR	R205 ----------
	1-244-673	1 kΩ	±10 %	R1/4.RD1/4SR	R123,223,231 --
	1-244-679	1.8 kΩ	±5 %	R1/4.RD1/4SR	R135,235 ------
	1-244-681	2.2 kΩ	±10 %	R1/4.RD1/4SR	R306 ----------
	1-244-689	4.7 kΩ	±10 %	R1/4.RD1/4SR	R211 ----------
	1-244-691-12) 1-244-691-09)	5.6 kΩ	±5 %	R1/4.RD1/4SR	R208,211 ------
	1-244-691-32) 1-244-691-31)	5.6 kΩ	±10 %	R1/4.RD1/4SR	R213 ----------
	1-244-697	10 kΩ	±5 %	R1/4.RD1/4SR	R226 ----------
	1-244-701	15 kΩ	±5 %	R1/4.RD1/4SR	R116,216 ------
	1-244-703	18 kΩ	±5 %	R1/4.RD1/4SR	R206 ----------
	1-244-707-12) 1-244-707-11)	27 kΩ	±5 %	R1/4.RD1/4SR	R125,225 ------
	1-244-707-32) 1-244-707-31)	27 kΩ	±10 %	R1/4.RD1/4SR	R119,219,220 --
	1-244-711	39 kΩ	±5 %	R1/4.RD1/4SR	R204 ----------

Ref. No.	Part No.	Description
	1-244-715-12) 1-244-715-09)	56 kΩ ±5 % R1/4.RD1/4SR R203,240 -------
	1-244-715-12) 1-244-715-11)	56 kΩ ±5 % R1/4.RD1/4SR R224 ----------
	1-244-715-32) 1-244-715-31)	56 kΩ ±10 % R1/4.RD1/4SR R212 ----------
	1-244-721	100 kΩ ±10 % R1/4.RD1/4SR R201 ----------
	1-244-733	330 kΩ ±10 % R1/4.RD1/4SR R217 ----------
	1-244-683	2.7 kΩ ±5 % R1/4.RD1/4SR R209,215 -------
	1-244-687	3.9 kΩ ±5 % R1/4.RD1/4SR R214 ----------
		Circuit Board, OSC Section
	1-539-011-13	Printed Circuit Board ----------
		Transistor
		2SC633 Q302 ----------
		Diode
		CD-2 D302,303 ----------
		CDR-2 D304,305 ----------
		SD-1Z D301 ----------
	1-433-132	Transformer, OSC. T302 ----------
		Mylar Capacitor
	1-106-086-12) 1-105-675-12)	50 WV MFL 0.015 µF ±10 % C315 ----------
	1-106-096-12) 1-105-680-12)	50 WV MFL 0.039 µF ±10 % C311 ----------
		Silvered Mica Capacitor
	1-107-055	500 WV 39 pF ±10 % C306,309 ----------
	1-107-015	500 WV 47 pF ±10 % C305,308 ----------
	1-107-034	500 WV 68 pF ±10 % C304,307 ----------

Ref. No.	Part No.	Description
		Electrolytic Capacitor
	1-121-353) 1-121-338)	16 WV 47 µF C316 ----------
	1-121-529	12 WV 2000 µF C301,303 ----------
		Polyethylene Capacitor
	1-129-709	630 WV 0.0039 µF ±5 % C310 ----------
		Carbon Resistor
	1-242-601	1 Ω ±10 % RD1/4UR R301 ----------
	1-242-625	10 Ω ±10 % ELR1/4.RD1/4UR R309 ----------
	1-242-631	18 Ω ±10 % ELR1/4.RD1/4UR R302 ----------
	1-242-697	10 Ω ±5 % ELR1/4.RD1/4UR R303 ----------
E7	8-822-636-20	Rec./P.B. Head PP78-3602 ----------
E8	8-828-136-02	Erase Head EF65-36 ----------
E9	8-834-007-01	Motor SY-105R ----------
E10	1-441-447-14	Transformer, power T301 ----------
E11	1-502-161	Speaker ----------
E12	1-507-106	Jack, binaural J302 ----------
E13	1-509-324	Connector w/ 4P Switch ----------
E14	1-513-254	Switch Slide, speaker, S5 ----------
E15	1-513-272	Switch Slide, mode, S6 ----------
E16	1-514-053	Switch Leaf, power, S3 ----------
E17	1-514-161	Switch Leaf, FWD/FF, RWD, S4 ----------
E18	1-514-266	Switch Leaf, BIAS, S7 ----------
E19	1-524-048	Level Meter ----------
	1-539-012	Circuit Board, switch ----------
E20	1-121-358) 1-121-341)	Electrolytic Capacitor 16 WV 220 µF C302 ----
		Silvered Mica Capacitor
	1-107-119	50 WV 33 pF ±10 % C318 ----------
		Electrolytic Capacitor
	1-121-358	16 WV 220 µF C302 ----------

STEREO CASSETTE-CORDER

TC-124CS

USA Model
Canada Model
UK Model
E Model

CORRECTION

Correct the parts number of battery lid on Service Manual for UK Model and Supplement for USA, E and Canada Model.

UK Model; page 20 (Service Manual)
Canada, USA, E Model; page 7 (Supplement No. 2)

INCORRECT	CORRECT
3-450-046 Lid, battery	3-450-045 Lid, battery

SONY®
SERVICE MANUAL

9-954-112-91

5H0665-1
Printed in Japan

© 1975

STEREO CASSETTE-CORDER

TC-124CS

General Export Model
Canada Model
USA Model

SUPPLEMENT

No. 2
Oct. 1971

Subject: Production Change on Mechanical Parts

Applicable Serial No.: 200001 and later for General Export Model (TC-124CS)
203201 and later for Canada Model (TC-124CS)
203501 to 205000 for USA Model (TC-124CS)
205001 to 205600 for USA Model (TC-124)

Use these exploded views on TC-124/124CS of the above mentioned serial numbers.

When ordering replacement parts you should use PART NUMBER listed on the Parts List or shown in the Exploded View. The reference number should not be used for ordering purposes.

HARDWARE

Part No.	*Description*
	SCREWS
7-621-255-15	⊕ P 2 x 3
7-621-255-25	⊕ P 2 x 4
7-621-255-35	⊕ P 2 x 5
7-621-255-45	⊕ P 2 x 6
7-621-255-65	⊕ P 2 x 10
7-621-259-20	⊕ P 2.6 x 4
7-621-259-25	⊕ P 2.6 x 4
7-621-259-55	⊕ P 2.6 x 8
7-621-259-63	⊕ P 2.6 x 10
7-621-559-45	⊕ K 2.6 x 6
7-621-559-65	⊕ K 2.6 x 10
7-621-659-49	⊕ RK 2.6 x 6
7-621-714-28	set screw 1.7 x 4
7-621-720-92	⊕ K 2.3 x 5, tapping
7-621-770-67	⊕ B 2.6 x 6
7-621-770-99	⊕ B 2.6 x 8
7-621-773-87	⊕ B 2.6 x 10
7-628-254-15	⊕ PS 2.6 x 6
7-628-254-25	⊕ PS 2.6 x 8
7-682-155-01	⊕ P 3 x 30
7-682-646-01	⊕ P 3 x 5 w/spring washer
	WASHERS
7-623-105-22	2φ
7-623-107-01	2.6φ (small)
7-623-107-22	2.6φ
7-623-108-22	3φ
	SPRING WASHERS
7-623-205-22	2φ
7-623-207-22	2.6φ
	RETAINING RINGS
7-624-104-01	E-2
7-624-106-01	E-3
7-624-102-01	E-1.5
	STILL BALL
7-671-112-01	2φ
	LUG PLATES
7-623-505-01	2φ
7-623-507-01	2.6φ
	NUT
7-622-107-01	2.6φ

SONY®
SERVICE MANUAL

– Hardware Nomenclature –

P – Pan Head Screw . . . . . .

PS – Pan Head Screw with Spring Washer . . . . . .

K – Flat Countersunk Head Screw . . .

B – Binding Head Screw . . . . . .

RK – Oval Countersunk Head Screw . .

T – Truss Head Screw . . . . . .

R – Round Head Screw . . . . . .

F – Flat Fillister Head Screw . . . . . .

SC – Set Screw . . . . . .

E – Retaining Ring (E Washer) . . . . . .

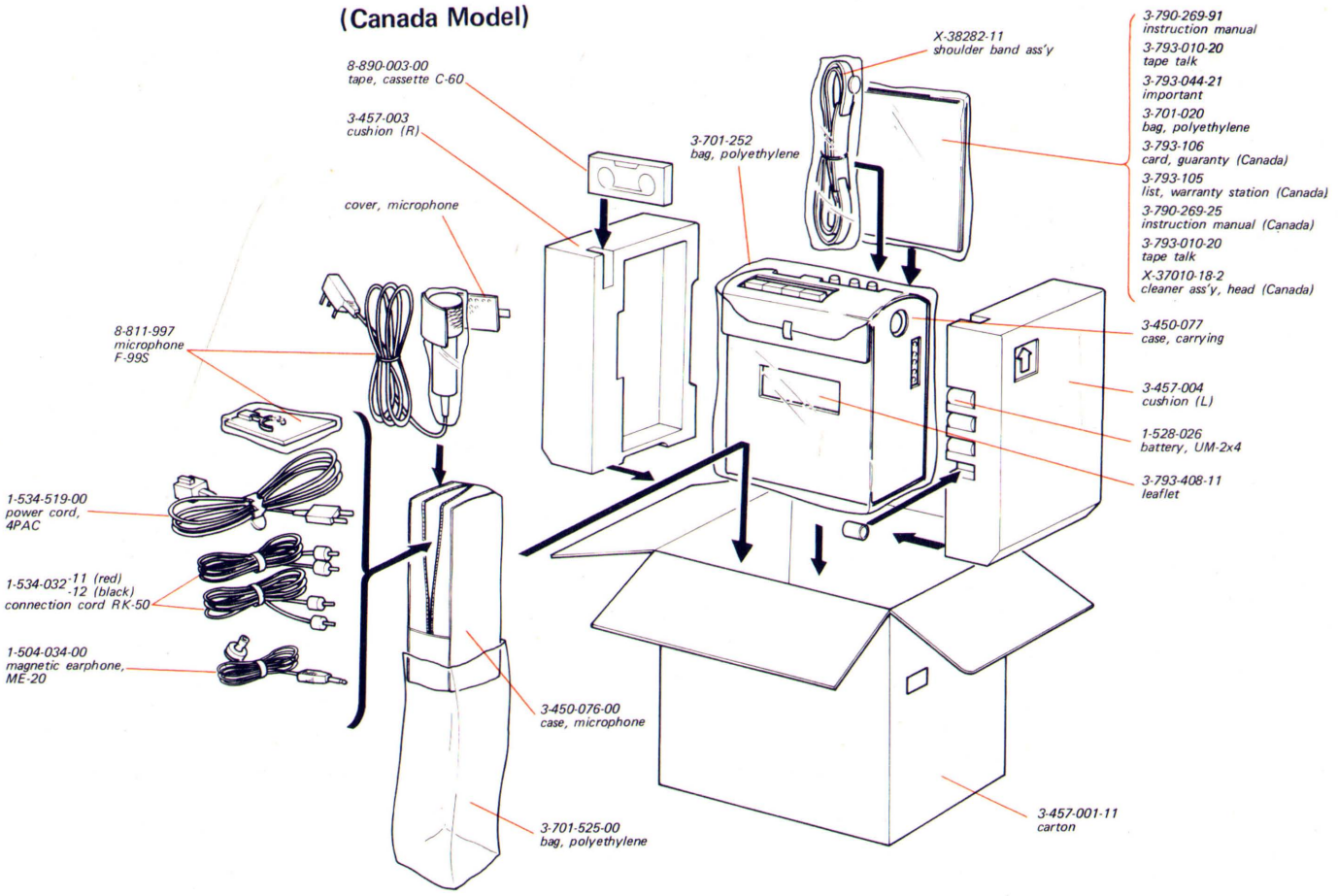
W – Washer
SW – Spring Washer
LW – Lock Washer
N – Nut

– Example –

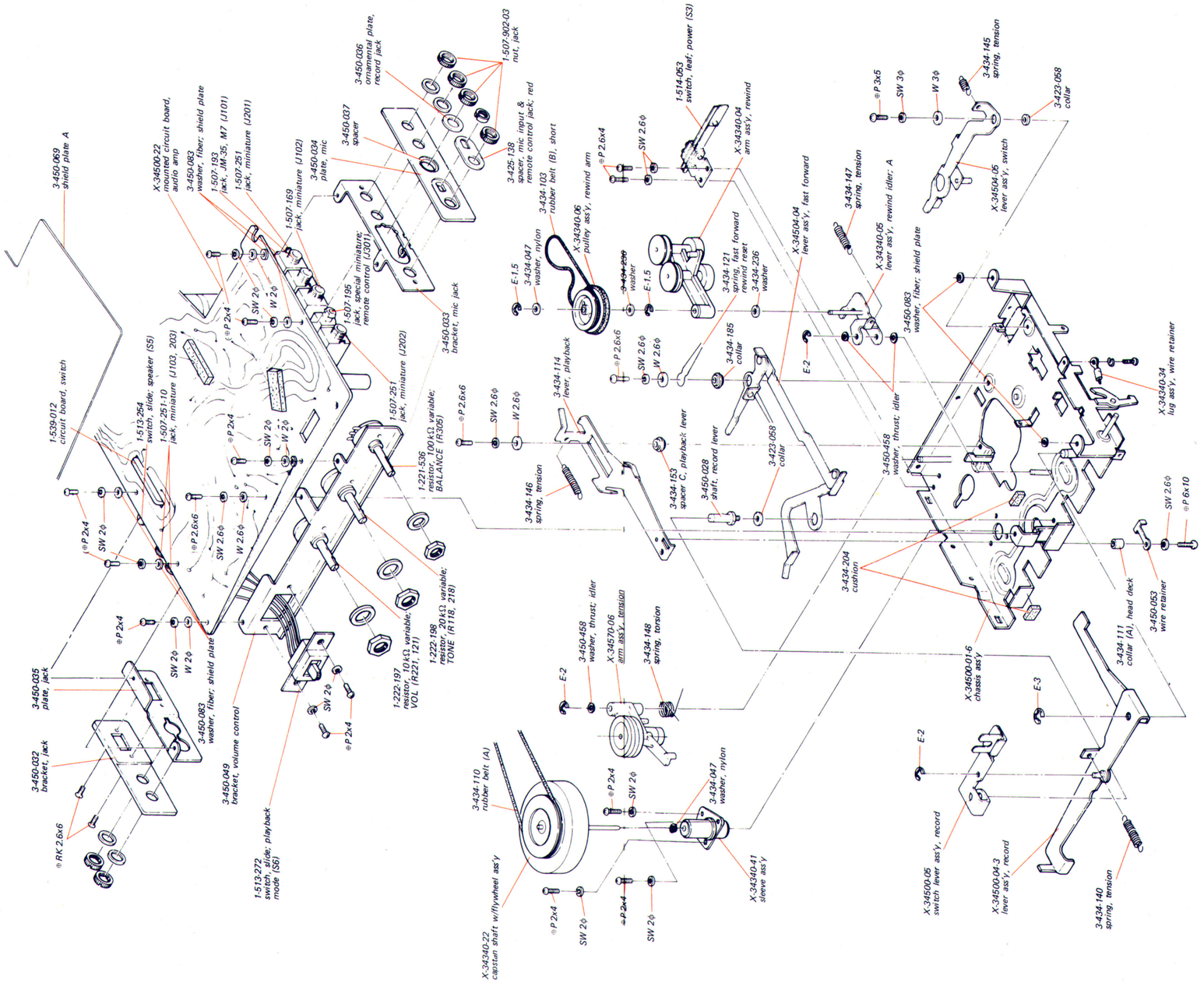
Type of Slot
⊕ P 3×10
Length in mm (L)
Diameter in mm (D)
Type of Head

1. Packing – TC-124 (USA Model)

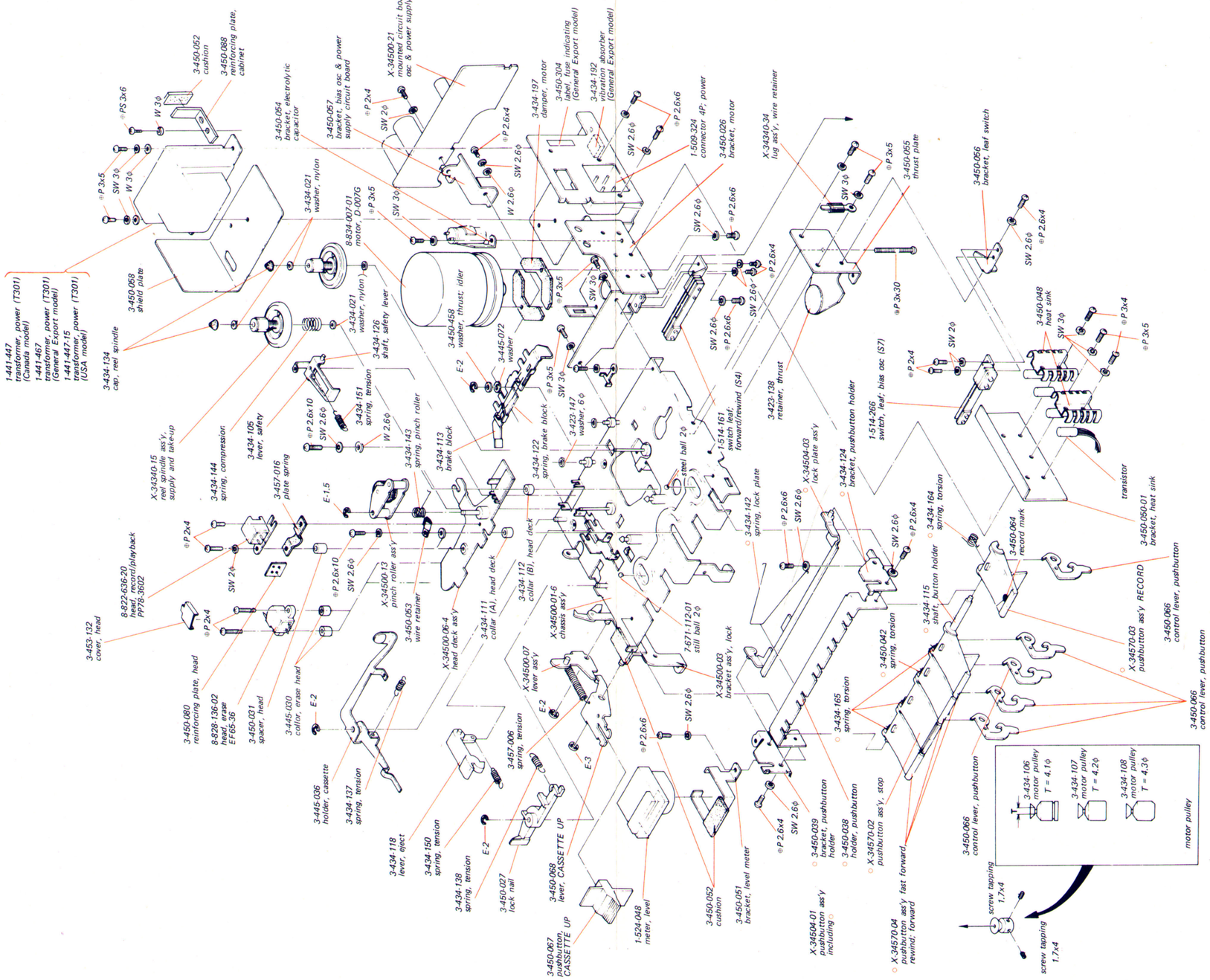
(Canada Model)



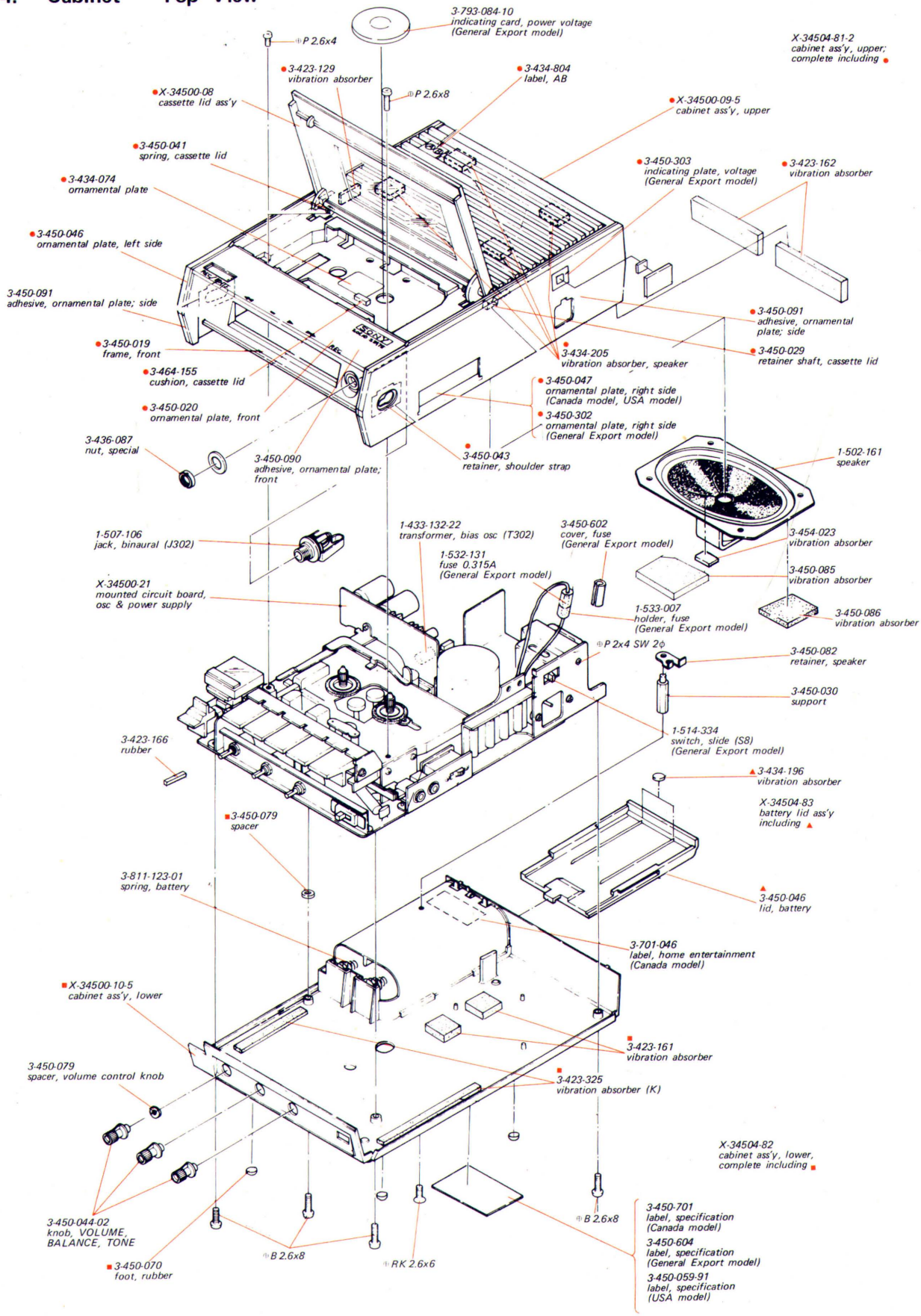
2. Chassis — Bottom View


3-450-069 shield plate A
1-539-012 circuit board, switch
X-34500-22 assembly, circuit board, audio amp
3-450-083 washer, fiber; shield plate
1-507-193 jack, JM-35, M7 (J101)
1-507-251 jack, miniature (J201)
3-450-037 spacer
3-450-036 ornamental plate, record jack
1-507-902-03 nut, jack
3-425-138 spacer, mic input & remote control jack; red
1-507-169 jack, miniature (J102)
3-450-034 plate, mic
1-513-254 switch, slide; speaker (S5)
1-507-251-10 jack, miniature (J103, 203)
1-507-195 jack, special miniature; remote control (J301)
3-450-033 bracket, mic jack
3-434-103 rubber belt (B), short
X-34340-06 pulley ass'y, rewind arm
1-514-053 switch, leaf; power (S3)
X-34340-04 arm ass'y, rewind
3-434-047 washer, nylon
3-434-230 washer
3-434-121 spring, fast forward reel reset
3-434-236 washer
X-34504-04 lever ass'y, fast forward
3-434-147 spring, tension
X-34340-05 lever ass'y, rewind idler; A
3-434-145 spring, tension
3-423-058 collar
X-34504-05 lever ass'y; switch
3-434-114 lever, playback
3-434-185 collar
1-507-251 jack, miniature (J202)
1-221-536 resistor, 100kΩ variable; BALANCE (R305)
3-434-146 spring, tension
3-434-153 spacer C, playback lever
3-450-028 shaft, record lever
3-423-058 collar
3-450-458 washer, thrust; idler
3-450-083 washer, fiber; shield plate
X-34340-34 lug ass'y, wire retainer
3-434-204 cushion
3-450-053 wire retainer
3-450-035 plate, jack
3-450-032 bracket, jack
3-450-083 washer, fiber; shield plate
3-450-049 bracket, volume control
1-513-272 switch, slide; playback mode (S6)
1-222-197 resistor, 10kΩ variable; VOL (R221, 121)
1-222-198 resistor, 20kΩ variable; TONE (R118, 218)
3-434-110 rubber belt (A)
X-34340-22 capstan shaft w/flywheel ass'y
3-450-458 washer, thrust; idler
X-34570-06 arm ass'y, tension
3-434-148 spring, torsion
3-434-047 washer, nylon
X-34340-41 sleeve ass'y
X-34500-01-6 chassis ass'y
3-434-111 collar (A), head deck
X-34500-05 switch lever ass'y, record
X-34500-04-3 lever ass'y; record
3-434-140 spring, tension

3. Chassis — Top View

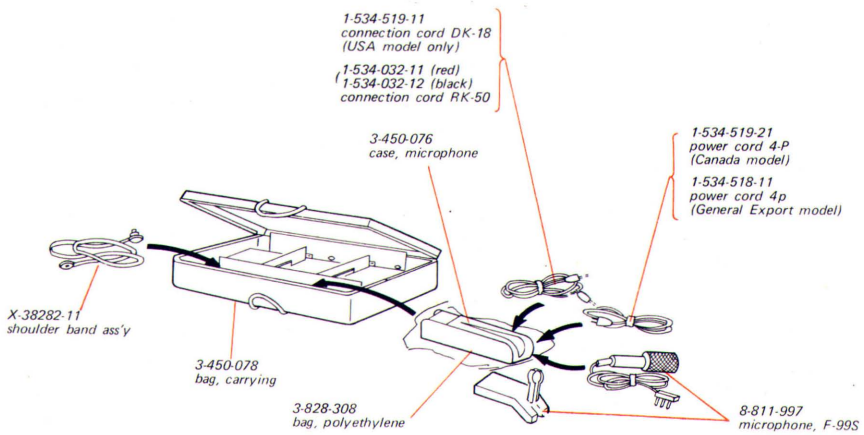


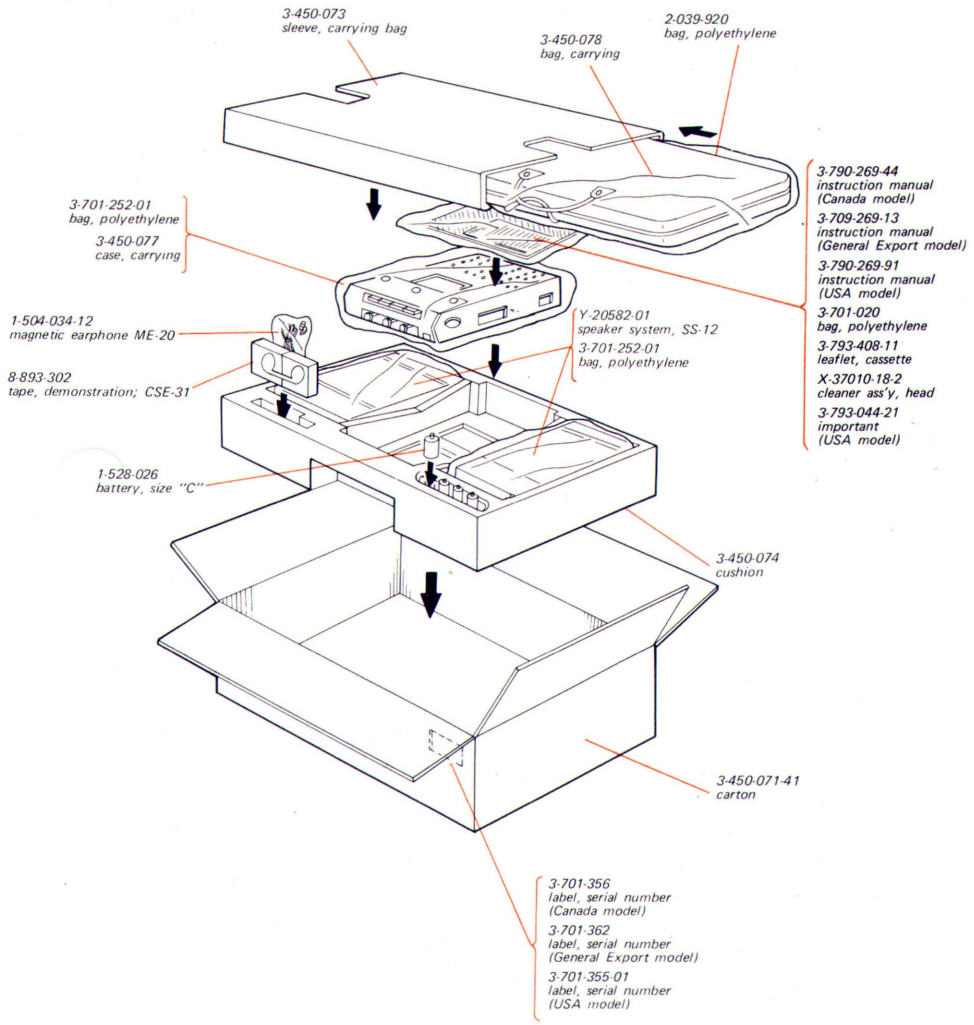
4. Cabinet — Top View



5. Packing — TC-124CS

General Export model
USA model
Canada model





Sony Corporation

© 1971
Printed in Japan